

NASA TECHNICAL MEMORANDUM

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COMPENDIUM OF METEOROLOGICAL DATA FOR THE VIKING B LAUNCH IN SEPTEMBER 1975

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METEOROLOGICAL DATA FOR THE VIKING B LAUNCH
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Marshall Space Flight Center, Alabama*

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16. ABSTRACT All the meteorological data for the 33-hour period before the Viking B launch from Kennedy Space Center at 1439 EDT on September 9, 1975, are archived at the Marshall Space Flight Center. These data were collected in support of the NASA Rocket Exhaust Effluent Prediction and Monitoring Program. This data set is unique in that soundings were made hourly from T-14 to T-0 hours, providing high temporal resolution. All supporting data, such as synoptic charts and wind tower data, are also included. This is the seventh and final data report in this series.			
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TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. DATA	2
III. LAUNCH CONDITIONS	8
 APPENDIX	
A. Synoptic Charts (1975)	11
8 September 0800 EDT (1200Z)	12
9 September 0800 EDT (1200Z)	13
10 September 0800 EDT (1200Z)	14
B. Surface Data, KSC	15
0154 EDT (0554Z) 9 Sept to 0057 EDT (0457Z) 10 Sept 1975	16
C. Rawinsonde Data	17
8 September 0510 EDT (0910Z), T-33 hr 29 min	18
8 September 1030 EDT (1430Z), T-28 hr 9 min	19
8 September 1339 EDT (1739Z), T-25 hr	20
9 September 0039 EDT (0439Z), T-14 hr	21
9 September 0239 EDT (0639Z), T-12 hr	22
9 September 0500 EDT (0900Z), T- 9 hr 39 min	23
9 September 0916 EDT (1316Z), T- 5 hr 23 min	24
9 September 1111 EDT (1511Z), T- 3 hr 28 min	25
9 September 1424 EDT (1824Z), T- 15 min	26
D. Windsonde (9 Sept. 1975)	27
0833 EDT (1233Z), T- 6 hr 6 min	28
1014 EDT (1414Z), T- 4 hr 25 min	28
1214 EDT (1614Z), T- 2 hr 25 min	28
1435 EDT (1835Z), T- 4 min	28
E. Tetroonsonde Data	29
8 September 1539 EDT (1939Z), T-23 hr	30 & 31
9 September 0707 EDT (1107Z), T- 7 hr 32 min	32, 33 & 34
9 September 1545 EDT (1945Z), T+ 2 hr 6 min	35 & 36

TABLE OF CONTENTS (Cont'd)

	<u>Page</u>
F. Jimsphere Wind Profiles	37
8 September 1239 EDT (1639Z), T-26 hr	38 & 39
9 September 0839 EDT (1239Z), T- 6 hr	40 & 41
9 September 1024 EDT (1424Z), T- 4 hr 15 min	42 & 43
9 September 1455 EDT (1855Z), T+ 16 min	44 & 45
G. Tower Data (2000 EDT 8 Sept to 1930 EDT 9 Sept)	46
Tower 106	48-50
108	51-53
110	54-56
303	57-59
308	60-62
311	63-65
313	66-68
403	69-71
412	72-74
415	75-77
509	78-80
714	81-83
803	84-86
H. Satellite Imagery (0940 EDT (1340Z) 9 Sept)	87
Visible band	88
IR band	89
I. Calculation of thermodynamic variables from GMD-4, AMQ-9 rawinsonde data	90

TECHNICAL MEMORANDUM X-73340

COMPENDIUM OF METEOROLOGICAL DATA FOR VIKING B LAUNCH IN SEPTEMBER 1975

INTRODUCTION

This is a compendium of all the meteorological data collected as a function of the Marshall Space Flight Center (MSFC), Langley Research Center (LaRC), and Kennedy Space Center (KSC) rocket exhaust effluent prediction and monitoring program for the Viking B launch. The Viking B was a Titan IIIE launch from pad 41 at the Kennedy Space Center at 1439 EDT on September 9, 1975. The data presented in this compendium were collected largely to support MSFC diffusion predictions for the deployment of LaRC/KSC monitoring sites. The joint solid rocket exhaust prediction (MSFC) and measurement (LaRC and KSC) program evolved in 1972 using the Titan and Delta launches as a source for empirical information that can be used to more accurately predict the environmental effects of planned Space Shuttle Operations.

These data are archived at MSFC because they are an aid in post-launch analysis and because they represent a unique set of atmospheric soundings with high temporal resolution. Included in the report are the synoptic charts, cloud satellite pictures, wind tower measurements and rawinsonde, tetroon-sonde, windsonde, and Jimsphere soundings made during this period. No attempt is made to analyze any of the data presented in this document.

DATA

The data are listed in Appendices A through I. Page numbers for specific data are given in the Table of Contents; the dates, times, and sources of the data are listed in Table 1.

The synoptic charts are from the series published weekly by the National Oceanographic and Atmospheric Administration (NOAA). The surface data are from the Cape Canaveral Air Force Station (location shown as KSC meteorological station in Figure 1).

The rawinsonde and the tetroonsonde runs were made with an AMQ-9 radiosonde (Figure 2) using the GMD-4 rather than the NOAA JOO5B radiosonde system. The temperature and humidity sensor data are transmitted ten times per minute in the AMQ-9 by a clock-actuated switch rather than the aneroid barometer switch used in the NOAA radiosonde. Both systems measure azimuth and elevation with the directional receiver in the GMD. A transponder in the AMQ-9 is used to obtain the slant range to the radiosonde, enabling the calculation of altitude. The pressure is then calculated according to the hypsometric equation. The equations used in the computer program to calculate various thermodynamic quantities from the basic altitude, temperature, and relative humidity data are given in Appendix I.

The windsonde measures Eulerian¹ wind direction and speed as a function of altitude and is similar to the rawinsonde (AMQ-9) except that it does not have temperature and humidity sensors.

The Jimsphere wind sensor (Figure 3) is a silvered spherical 2-meter diameter superpressure balloon with large irregularly spaced external roughness elements. The roughness elements effectively decrease random vortex shedding, or aerodynamic noise, associated with a smooth balloon operating in a supercritical Reynolds number regime. Thus, the Jimsphere balloon follows small-scale wind motions with high accuracy. The Eulerian¹ wind profile obtained by precision tracking of a Jimsphere balloon has a resolution of less than 100 meters.

The tetroonsonde is a constant level 6-m³ balloon with a suspended radiosonde (Figure 4). The tetroonsonde system provides both kinematic and thermodynamic Lagrangian¹ information. The balloon is designed to attain an equilibrium altitude of approximately 609 m (2000 ft); however, in practice, the flight altitude is usually within 250 m of the design altitude.

Since it is envisioned that use of the rawinsonde, windsonde, and Jimsphere data will be restricted to studies of the stabilized Space Shuttle rocket booster cloud, an altitude limit of 6.8 km (20 000 ft) was chosen; all data beyond that altitude have been excluded from this report. The excluded data are archived at MSFC and are available.

¹For practical applications, the rawinsonde, windsonde, and Jimsphere data are treated as Eulerian, and the tetroonsonde data are treated as Lagrangian.

TABLE 1
Meteorological Data Summary for Viking B Launch
on September 9, 1975, at 1439 EDT (1839Z)

Data Type	Date (Sept. 75)	Time	Source
		EDT	Relative ⁽¹⁾
Synoptic Charts ⁽²⁾	8	0800	T-30 hr 39 min
	9	0800	T- 6 hr 39 min
	10	0800	T+17 hr 21 min
Surface Observations ⁽³⁾	9,10	0154 (9 Sept) to 0057 (10 Sept)	T-12 hr 45 min to T+10 hr 18 min
Rawinsonde	8	0510	T-33 hr 29 min
	8	1030	T-18 hr 9 min
	8	1339	T-25 hr
	9	0039	T-14 hr
	9	0239	T-12 hr
	9	0500	T- 9 hr 39 min
	9	0916	T- 5 hr 23 min
	9	1111	T- 3 hr 28 min
	9	1424	T- 15 min
Windsonde (9 Sept)		0833	T- 6 hr 6 min
		1014	T- 4 hr 25 min
		1214	T- 2 hr 25 min
		1435	T- 4 min
Tetroonsonde	8	1539	T-23 hr
	9	0707	T- 7 hr 32 min
	9	1545	T+ 1 hr 6 min
Jimsphere	8	1239	T-26 hr
	9	0839	T- 6 hr
	9	1024	T- 4 hr 15 min
	9	1455	T+ 16 min
Tower Data	8,9	2000 (8 Sept) to 1930 (9 Sept)	T-18 hr 39 min to T+ 4 hr 51 min
Satellite Imagery	9	0940	T- 4 hr 51 min

(1) Relative to launch time, for example 1441 EDT = T+2 min.

(2) Charts for surface and 500 mb; also included are precipitation and maximum and minimum temperatures for the preceding 24-hr period.

(3) Location of the base station for upper air and surface observations and towers are illustrated in Figure 1.

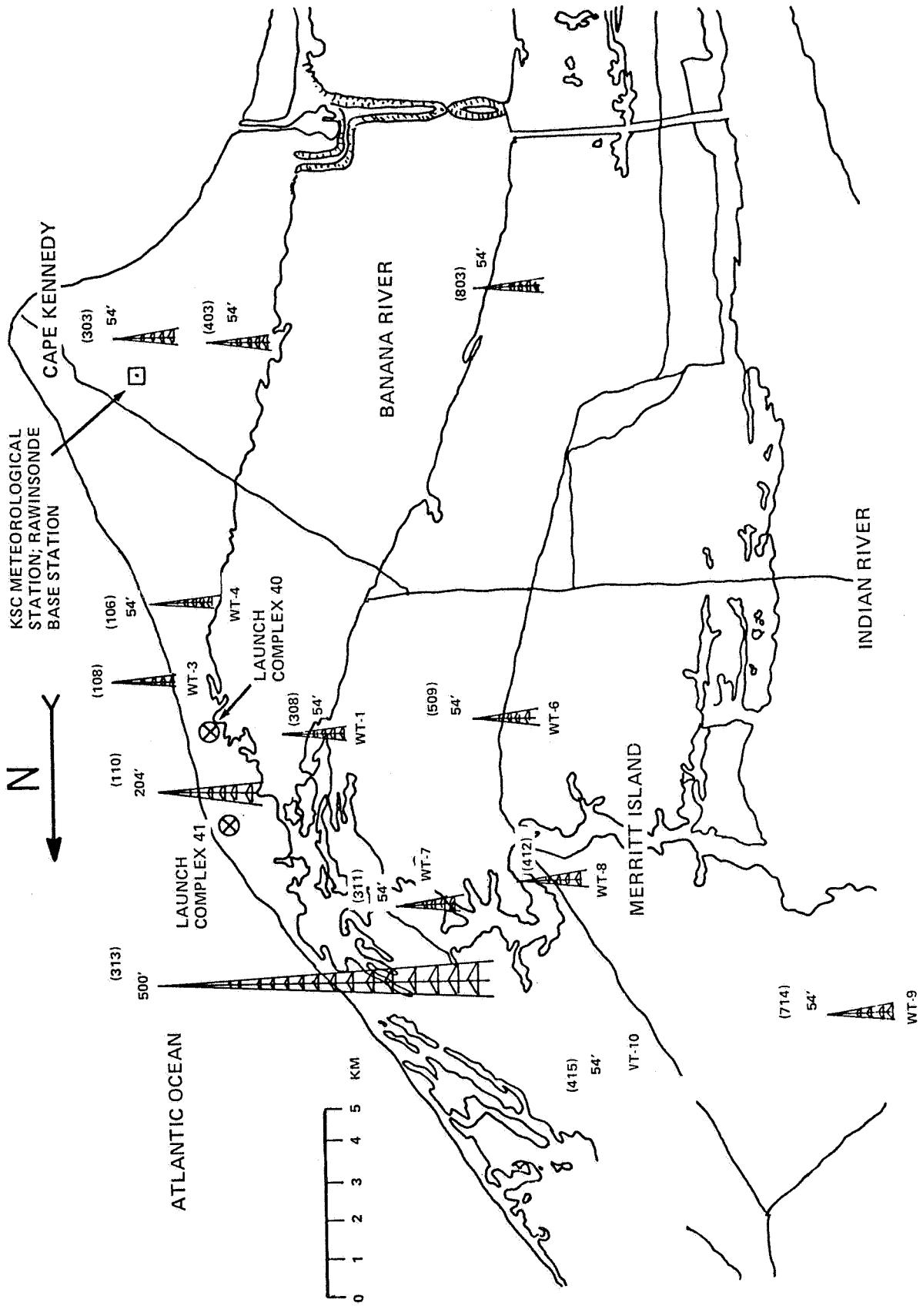


Figure 1. Location of meteorological towers and KSC meteorological station.

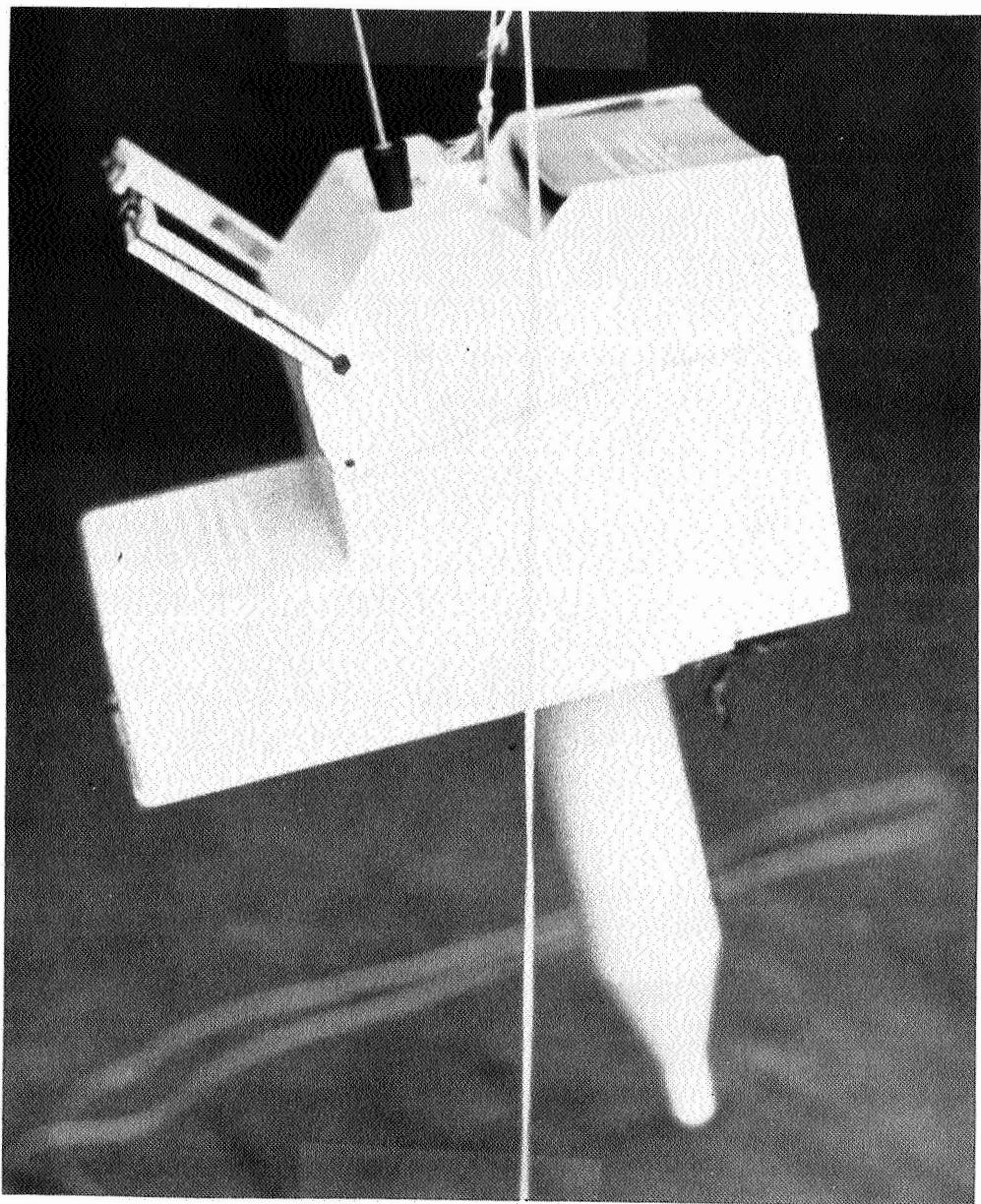


Figure 2. AMQ-Radiosonde

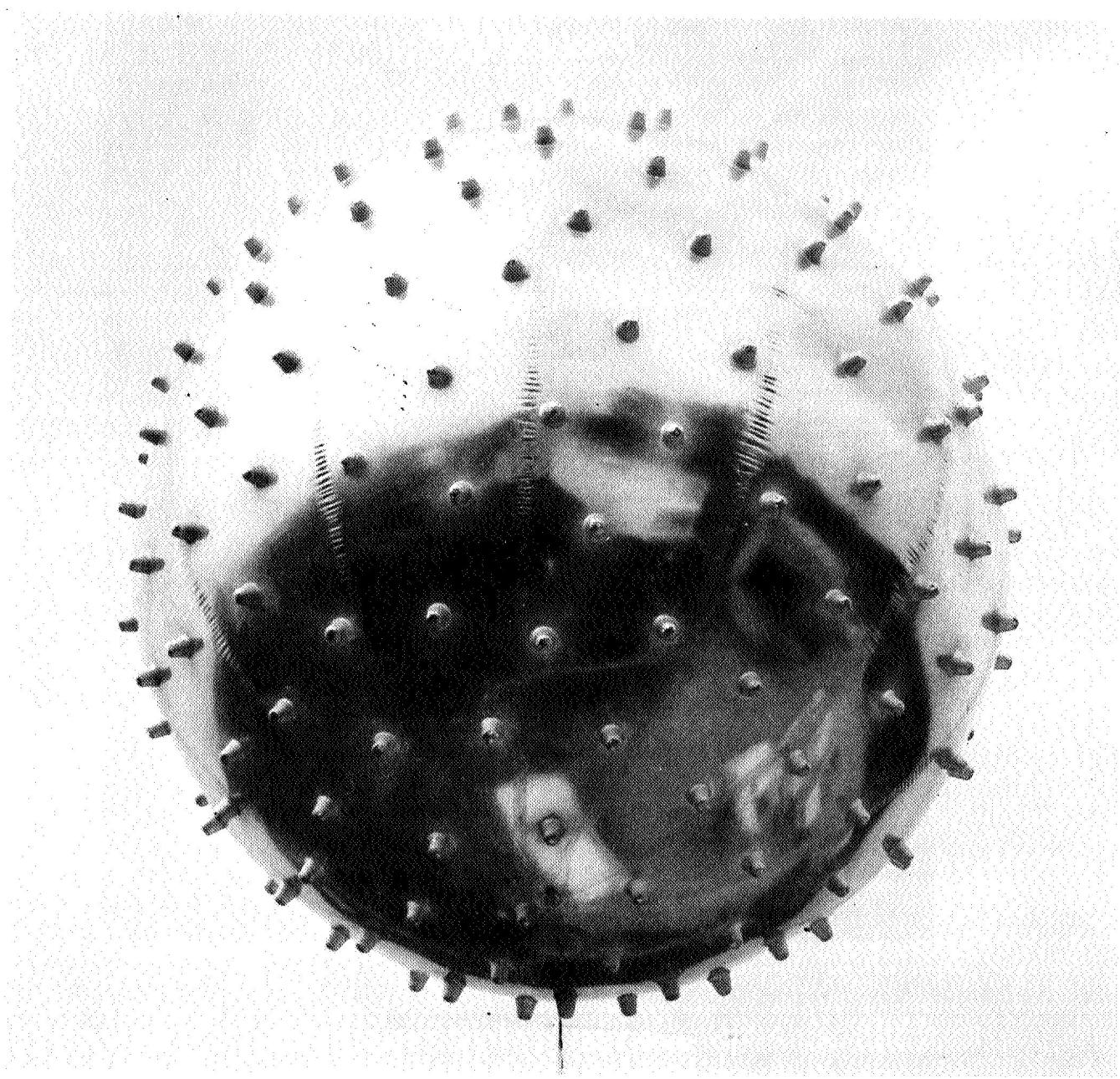


Figure 3. Jimsphere Wind Sensor

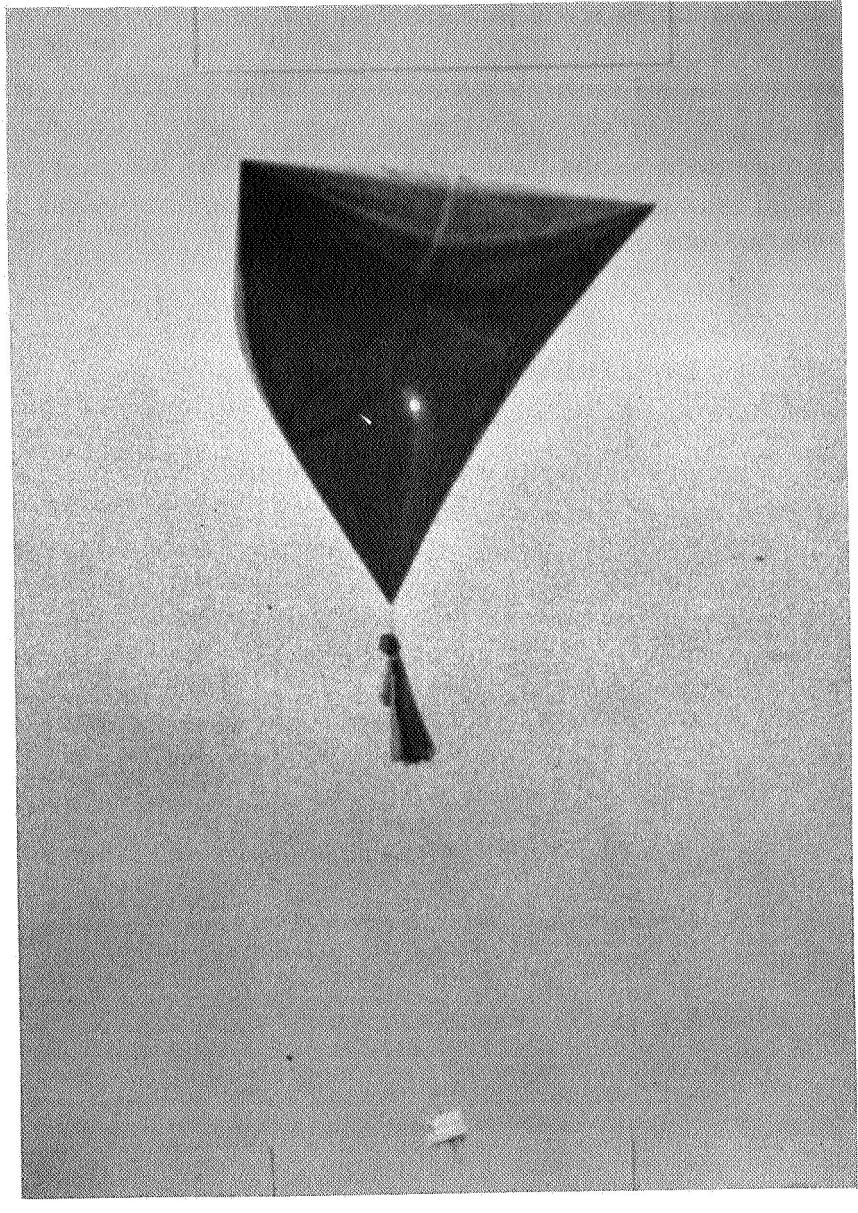


Figure 4. Tetroonsonde.

The data contained in this report cover a time period which is sufficient for most anticipated meteorological analyses. The chronology of the data relative to the time of launch is given in Figure 5. In most studies, data within 1.5 hours of launch time (1439 EDT, September 9) are sufficient. To facilitate retrieval of these data, an index is provided in Table 2 which gives the page number of data obtained within 1.5 hours of launch. It is understood that for dynamic situations, such as the onset of a sea breeze or the passage of a front within 1.5 hours of launch, the selection of data appropriate to the launch would have to be narrowed to a more appropriate period.

LAUNCH CONDITIONS

The launch occurred during a period of thunderstorm activity at KSC. Thunder to the west was within audible range, and cumulonimbus clouds were observed in all quadrants. The track of a thunderstorm cell located to the west of the launch complex 41 intersected the exhaust cloud during the period 5 to 10 minutes after launch.

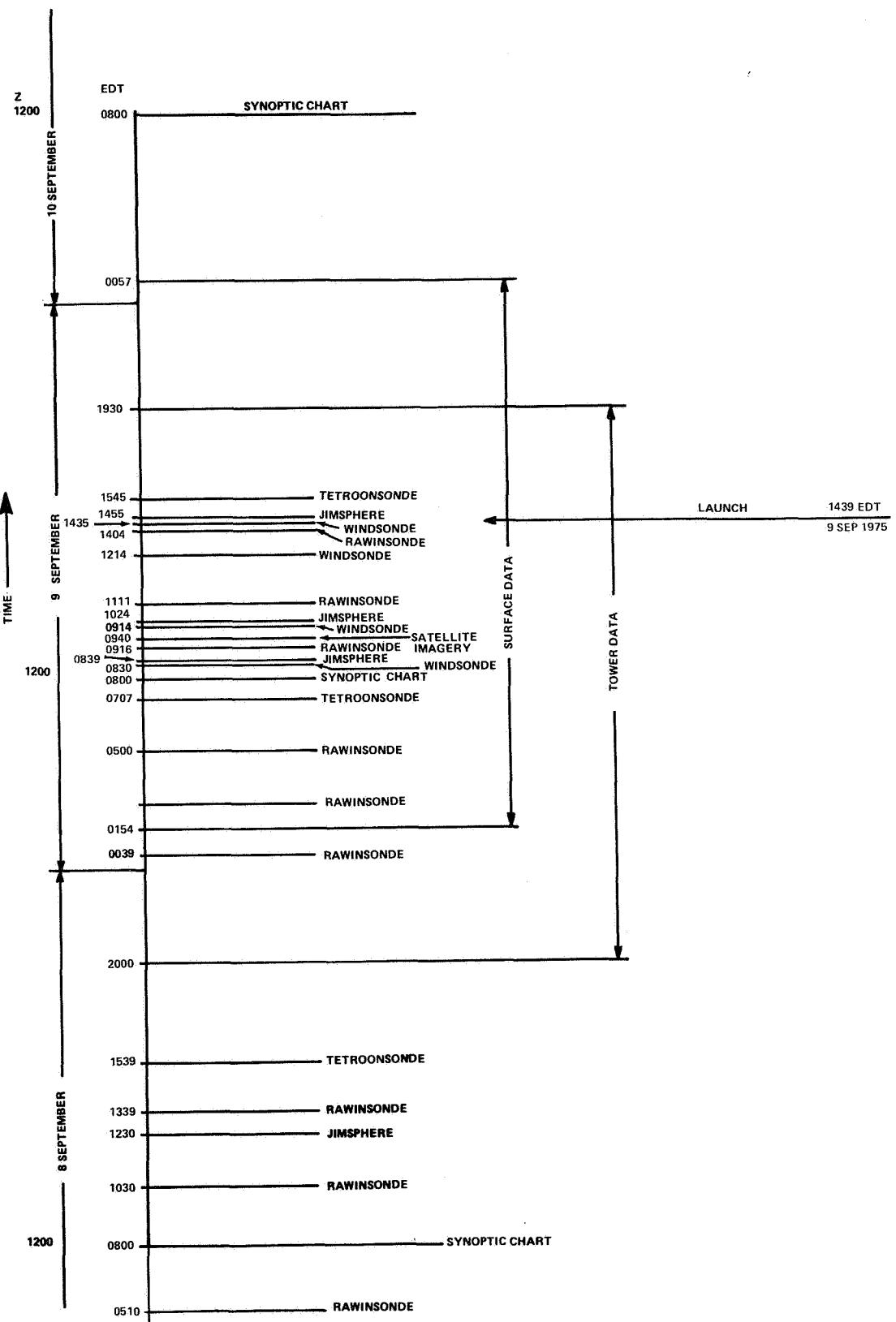


Figure 5. Data chronology.

Table 2

Meteorological Data Obtained within 1.5 Hours
of T-0 (1439 EDT, 9 Sept. '75)

Time		Page
T-1 hr 9 min (1330 EDT) ⁽¹⁾		(3)
T- 43 min (1356 EDT) Surface observation		16
T- 15 min (1424 EDT) Rawinsonde		26
T- 4 min (1435 EDT) Windsonde		28
T- 0 min (1439 EDT) Surface observation		16
T+ 16 min (1455 EDT) Jimsphere	Tower ⁽²⁾	44 & 45
T+ 17 min (1456 EDT) Surface observation		26
T+ 21 min (1500 EDT) ⁽¹⁾		(3)
T+ 30 min (1509 EDT) Surface observation		16
T+ 35 min (1514 EDT) Surface Observation		16
T+ 49 min (1528 EDT) Surface Observation		16
T+ 51 min (1530 EDT) Tower ⁽²⁾		(3)
T+ 56 min (1535 EDT) Surface observation		16
T+1 hr 6 min (1545 EDT) Tetroonsonde		35 & 36
T+1 hr 16 min (1555 EDT) Surface observation		16
T+1 hr 21 min (1600 EDT) Tower ⁽²⁾		(3)

(1) Tower data at 5 minute intervals during the indicated period.

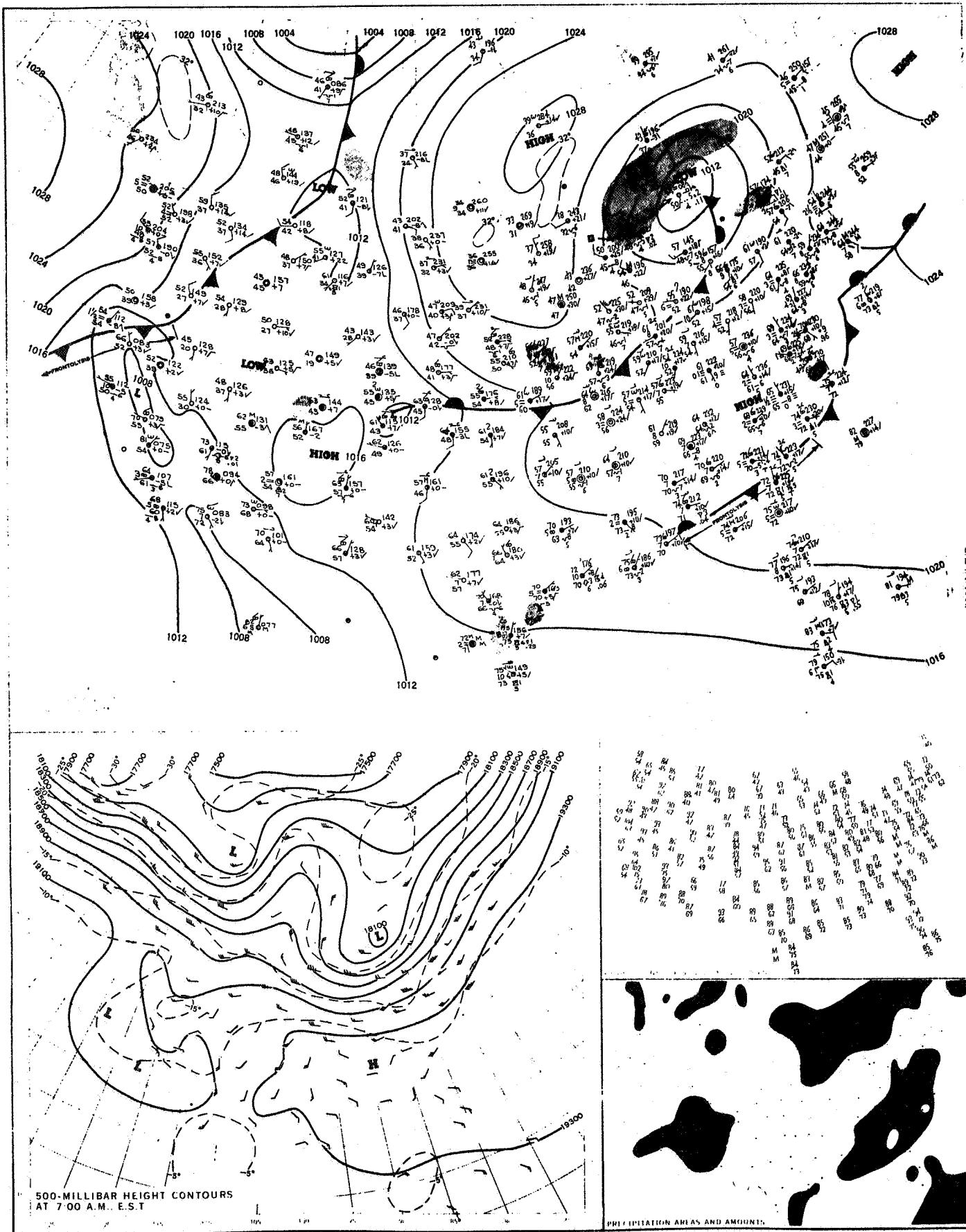
(2) Towers 106, 108, 110, 303, 308, 311, 313, 403, 412, 415, 509, 714 & 803.

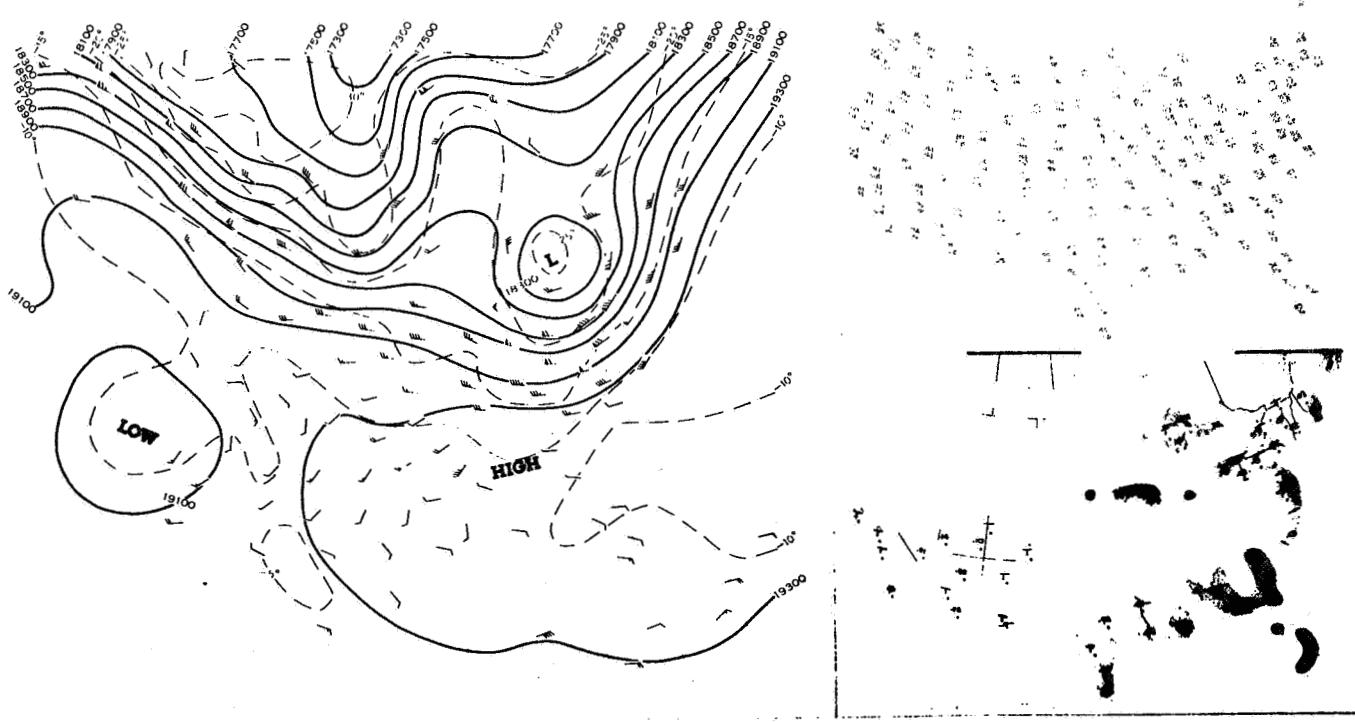
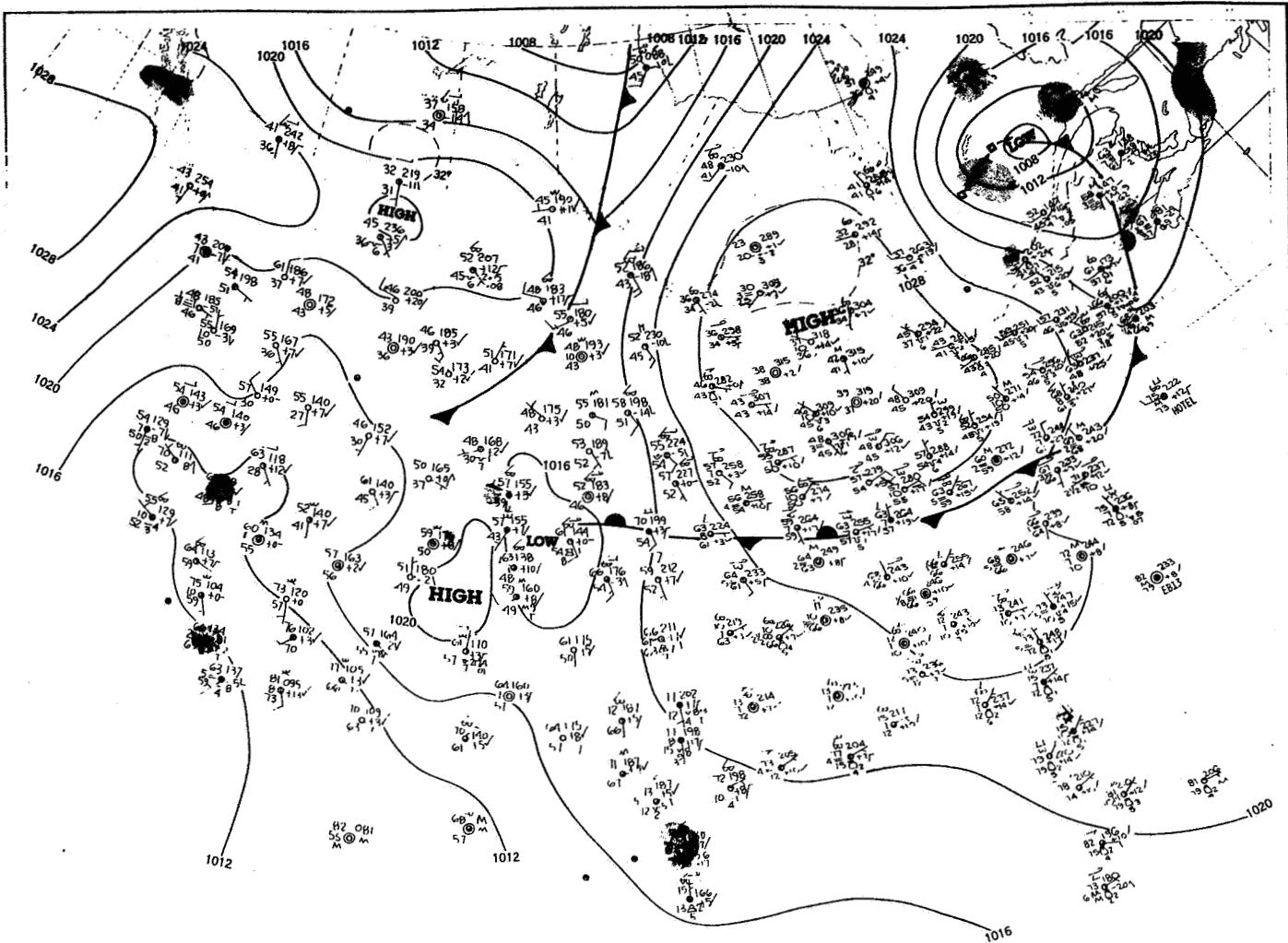
(3) Pages 48 - 86

APPENDIX A

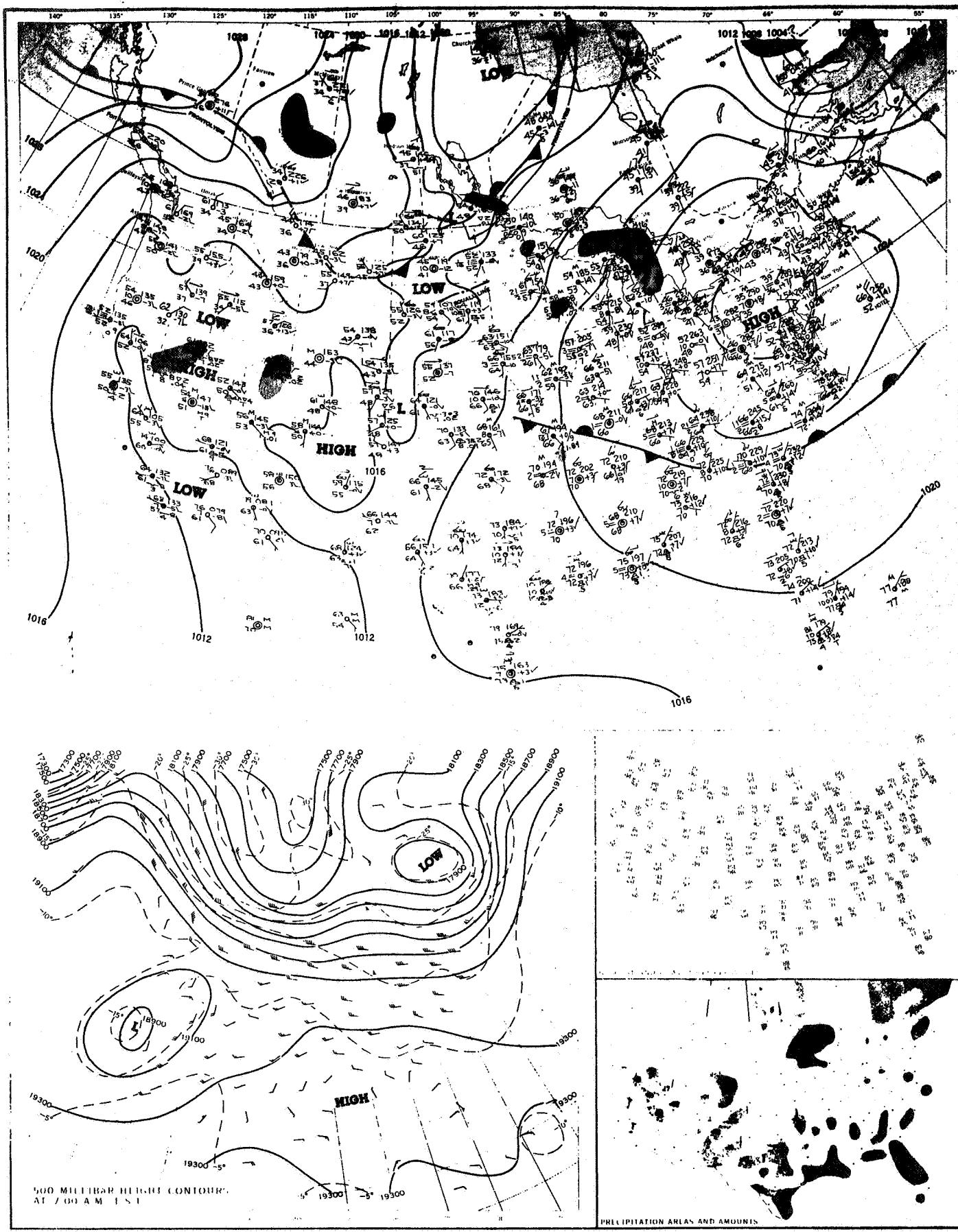
SYNOPTIC CHARTS

MONDAY, SEPTEMBER 8, 1975





Wednesday, September 10, 1975



APPENDIX B

SURFACE DATA

APPENDIX C

RAWINSONDE DATA

TEST NBR 04351 0-34HR
 RAWINSONDE RUN AN/GMD-4
 CAPE CANAVERAL AFS, FLORIDA
 0910Z 08 SEP 1975

ASCENT NBR 0542

ALT FT	DIR DEG	SPD KTS	TEMP DEG C	D/PT DEG C	PRESS MBS	RH PCT	ABHUM G/M3	DENSITY G/M3	IR N	V/S SEC	SHEAR DEG
000016	090	004	25.9	23.4	1019.00	086	20.87	1174.38	384	674	0000 000
001000	122	008	25.3	24.1	0985.08	093	21.74	1136.74	381	673	.008 149
002000	142	008	23.3	22.5	0951.65	095	19.89	1106.40	364	671	.005 211
003000	146	009	21.2	18.2	0919.06	083	15.42	1079.31	332	668	.001 260
004000	141	007	19.6	15.2	0887.36	076	12.79	1049.20	310	667	.002 004
005000	150	008	18.5	13.4	0856.58	073	11.46	1016.41	295	665	.002 198
006000	164	010	17.4	10.4	0826.75	064	9.46	985.72	277	664	.006 199
007000	173	014	15.3	8.7	0797.77	065	8.49	959.46	265	662	.007 200
008000	175	016	13.1	6.2	0769.60	063	7.16	932.28	252	659	.004 183
009000	172	017	10.3	6.3	0742.17	077	7.32	907.81	248	656	.002 139
010000	171	018	7.4	6.2	0715.47	092	7.34	883.85	243	653	.001 138
011000	170	018	5.7	4.2	0689.52	090	6.40	857.57	231	651	.001 113
012000	168	018	4.3	1.5	0664.39	083	5.38	831.10	219	649	.001 065
013000	157	014	2.4	.1	0639.99	085	4.86	806.08	210	647	.008 027
014000	151	013	.2	-2.4	0616.31	082	4.07	782.95	200	644	.003 016
015000	143	012	-3.0	-5.7	0593.34	076	3.21	760.34	190	642	.003 027
016000	137	012	-3.6	-10.6	0571.05	058	2.20	736.62	178	640	.002 058
017000	135	012	-5.6	-14.6	0549.44	049	1.60	714.40	170	637	.001 085
018000	131	011	-6.9	-22.8	0528.52	027	0.79	690.98	159	636	.003 347
019000	120	009	-8.8	-17.9	0508.27	052	01.32	668.91	158	633	.004 351
020000	102	010	-10.2	-20.1	0488.69	050	01.19	646.74	152	632	.006 040

MANDATORY LEVELS

ALT FT	DIR	KTS	TEMP	D/PT	PRESS	RH
000562	113	006	25.6	23.8	1000.0	090
002047	143	008	23.2	22.3	0950.0	095
003592	143	007	20.3	16.1	0900.0	077
005209	153	008	18.3	12.8	0850.0	071
006910	173	014	15.4	8.8	0800.0	064
008696	173	017	11.1	6.3	0750.0	072
010572	170	018	6.4	4.8	0700.0	090
012561	160	015	3.4	1.0	0650.0	084
014676	146	012	-1.3	-4.6	0600.0	078
016936	135	012	-5.5	-14.5	0550.0	049
019373	116	009	-9.6	-11.6	0500.0	086

SIGNIFICANT LEVELS

ALT FT	DIR	KTS	TEMP	D/PT	PRESS	IR
000016	090	004	25.9	23.4	1019.00	384
002043	143	008	23.2	22.4	0950.23	363
006393	169	012	16.6	8.9	0915.27	269
007991	175	016	13.1	6.2	0769.86	252
009800	171	018	7.8	6.7	0720.76	245
011789	169	018	4.6	3.6	0669.61	225
012288	167	017	3.8	-1.5	0657.28	211
012606	159	015	3.4	1.2	0649.51	215
015136	142	012	-2.3	-6.2	0590.28	189
017978	131	011	-6.8	-22.8	0528.97	159
018790	123	009	-8.3	-22.0	0512.47	156
019427	116	009	-9.7	-11.5	0499.82	161

TEST NBR 03717 04834 0-28HR
 RAWINSONDE RUN AN/GMD-4
 CAPE CANAVERAL AFS, FLORIDA
 1430Z 08 SEP 1975
 ASCENT NBR 0543

ALT FT	DIR KTS	SPD DEG	TEMP DEG C	D/PT DEG C	PRESS MBS	RH PCT	ABHUM G/M3	DENSITY G/M3	IR N	V/S SEC	SHEAR /SEC DEG
000016	090	007	29.5	23.2	1021.70	069	20.34	1163.99	377	678	0000 000
001000	095	011	26.3	22.9	0987.90	082	20.23	1135.98	372	674	.007 104
002000	105	011	23.9	21.7	0954.41	088	18.98	1107.97	359	671	.003 201
003000	105	010	22.4	16.6	0921.81	070	13.89	1079.02	323	670	.002 283
004000	099	008	20.5	15.3	0890.11	072	12.84	1048.16	310	668	.003 308
005000	092	006	19.0	13.6	0859.31	071	11.58	1017.62	296	666	.003 307
006000	088	006	16.3	13.6	0829.39	084	11.70	0990.98	292	663	.001 340
007000	090	007	14.5	10.8	0800.25	079	09.79	0963.41	274	661	.001 109
008000	105	007	12.8	8.7	0771.96	076	08.56	0935.27	261	659	.003 185
009000	120	007	10.8	7.3	0744.46	079	07.83	0909.64	251	656	.003 197
010000	128	007	9.0	4.9	0717.78	075	06.66	0882.08	238	654	.002 213
011000	142	007	7.9	2.6	0691.92	069	05.70	0854.12	226	653	.003 228
012000	155	007	6.2	-0.4	0666.84	062	04.61	0828.80	214	651	.003 224
013000	156	008	4.0	-2.8	0642.50	061	03.90	0805.21	204	649	.002 157
014000	153	009	1.9	-4.7	0618.86	062	03.41	0781.87	196	646	.002 135
015000	152	010	.4	-8.0	0595.93	058	02.87	0757.33	187	644	.001 132
016000	150	010	-1.8	-9.6	0573.69	055	02.36	0735.05	179	642	.001 006
017000	154	009	-5.0	-11.9	0552.13	054	01.98	0713.37	172	639	.002 300
018000	165	009	-5.8	-16.9	0531.21	041	01.32	0691.44	163	637	.003 265
019000	175	009	-8.0	-23.3	0510.97	026	00.77	0668.46	154	636	.003 255
020000	182	008	-8.7	-26.8	0491.39	022	00.56	0647.07	148	633	.002 310

MANDATORY LEVELS

ALT FT	DIR KTS	TEMP	D/PT	PRESS	RH
000644	090	011	27.0	23.5	1000.0
002130	105	011	23.6	21.1	0950.0
003679	101	009	21.1	15.8	0900.0
005299	091	006	18.4	13.3	0850.0
006996	090	007	14.4	10.7	0800.0
008780	118	007	10.9	7.6	0750.0
010663	136	007	8.4	3.5	0700.0
012663	157	008	4.7	-2.2	0650.0
014789	152	010	.6	-6.9	0600.0
017062	155	009	-4.2	-11.9	0550.0
019510	179	008	-8.1	-27.5	0500.0
					019

SIGNIFICANT LEVELS

ALT FT	DIR KTS	TEMP	D/PT	PRESS	IR
000016	090	007	29.5	23.2	1021.70
000391	087	011	27.5	23.8	1008.74
001494	100	011	25.1	21.6	0971.25
001926	104	011	24.0	22.1	0956.88
002913	105	010	22.6	16.7	0924.62
005672	090	006	17.4	13.2	0839.11
006151	087	006	15.8	13.9	0824.92
011839	154	007	6.6	.2	0670.82
017247	156	008	-4.6	-12.1	0546.92
					171

TEST NBR 04834 04351 0-25HR
 RAWINSONDE RUN AH/GMD-1
 CAPE CANAVERAL AFS, FLORIDA
 1739Z 08 SEP 1975
 ASCENT NBR 0544

ALT FT	DIR DEG	SPD KTS	TEMP DEG C	D/PT DEG C	PRESS MBS	RH PCT	ABHUM G/M3	DENSITY G/M3	IR N	V/S SEC	SHEAR DEG
000016	090	008	30.9	25.1	1021.30	071	22.71	1156.62	389	679	0000 000
001000	102	014	25.4	22.7	0987.59	085	20.08	1140.48	372	673	.010 117
002000	106	013	23.4	19.3	0954.00	078	16.34	1110.88	344	671	.002 214
003000	107	012	21.5	17.1	0921.32	076	14.42	1080.54	327	669	.003 281
004000	102	009	19.2	14.7	0889.53	075	12.45	1052.48	309	666	.004 304
005000	092	007	17.6	12.5	0858.60	072	10.84	1022.08	293	664	.004 313
006000	098	008	16.0	10.4	0928.57	069	9.45	0992.44	278	662	.001 049
007000	100	009	14.2	7.8	0799.40	065	8.00	0964.22	264	660	.004 142
008000	111	011	12.5	6.4	0771.08	066	7.30	0936.03	253	658	.004 153
009000	120	010	10.6	4.1	0743.60	064	6.28	0909.04	241	656	.003 217
010000	139	009	9.4	1.3	0716.93	057	5.16	0880.78	228	655	.006 249
011000	156	009	8.1	-0.5	0691.10	055	4.56	0853.26	218	653	.004 244
012000	164	009	5.9	-2.6	0666.03	054	3.91	0829.23	209	651	.002 228
013000	171	009	3.6	-4.5	0641.67	055	3.42	0805.76	201	648	.002 255
014000	184	008	1.3	-6.4	0618.02	057	2.99	0782.79	193	645	.003 279
015000	197	009	-2.0	-9.4	0595.05	057	2.59	0760.28	186	643	.003 288
016000	209	007	-2.8	-10.7	0572.75	055	2.17	0736.82	178	641	.003 333
017000	218	005	-5.4	-13.1	0551.11	054	1.81	0713.92	171	637	.004 009
018000	223	003	-8.0	-15.9	0530.13	049	1.45	0693.14	164	636	.003 028
019000	247	002	-10.0	-19.2	0509.82	043	1.10	0671.63	157	633	.002 006
020000	272	002	-10.5	-18.2	0490.16	053	0.20	0649.31	153	631	.002 348

MANDATORY LEVELS

ALT FT	DIR	KTS	TEMP	D/PT	PRESS	RH
000633	099	011	27.4	23.6	1000.0	080
002118	106	013	23.2	19.1	0950.0	078
003662	104	010	20.1	15.3	0900.0	074
005275	089	007	17.2	12.0	0850.0	071
006967	100	009	14.3	7.9	0800.0	065
008748	118	011	11.1	4.8	0750.0	065
010631	151	008	8.7	3	0700.0	055
012629	168	009	4.4	-3.8	0650.0	055
014750	194	008	-0.5	-7.9	0600.0	057
017014	218	005	-5.5	-13.2	0550.0	054
019449	262	002	-9.9	-19.5	0500.0	045

SIGNIFICANT LEVELS

ALT FT	DIR	KTS	TEMP	D/PT	PRESS	IR
000016	090	008	30.9	25.1	1021.30	389
001017	102	014	25.3	22.7	0987.00	372
004241	100	009	18.6	14.3	0882.00	306
010769	153	008	8.6	.1	0697.00	221
016819	217	005	-5.1	-12.7	0555.00	173
020954	285	002	-11.0	-33.0	0472.00	142

TEST HBR 04834 OMINUS 14 HR DATA

RAWINSONDE RUN AN/GMD-4
 CAPE CANAVERAL AFS, FLORIDA
 0439Z 09 SEP 1975

ASCENT HBR 0545

ALT FT	DIR DEG	SPD KTS	TEMP DEG C	D/PT MBS	PRESS PCT	RH G/N3	ABHUM G/M3	DENSITY H KTS	IR /SEC	V/S DEG	SHEAR
0000016	110	002	26.5	24.3	1021.70	088	21.96	1174.74	390	674	0000 000
001000	130	014	26.8	23.4	0987.86	082	20.84	1134.60	375	675	.021 134
002000	131	014	25.7	21.9	0954.45	079	19.09	1101.09	357	673	.000 254
003000	131	014	24.5	20.3	0922.16	077	17.32	1069.72	340	672	.000 286
004000	129	013	22.8	18.5	0890.74	077	15.60	1039.09	324	670	.002 330
005000	127	012	22.7	17.6	0860.28	073	14.72	1004.14	311	670	.001 006
006000	126	012	21.0	15.5	0830.75	071	13.01	0976.08	295	668	.001 336
007000	126	011	18.8	12.4	0902.04	066	10.77	0950.50	276	666	.002 310
008000	126	010	16.5	10.8	0774.09	069	09.68	0925.14	265	663	.002 304
009000	127	009	14.3	9.9	0746.91	075	09.23	0899.56	257	661	.002 298
010000	127	007	12.5	7.3	0720.50	071	07.78	0873.94	242	658	.002 303
011000	121	005	10.1	5.0	0694.79	070	06.67	0850.40	231	656	.003 325
012000	110	004	6.9	2.7	0669.79	074	05.73	0829.69	221	652	.003 324
013000	096	003	3.6	-0.5	0645.38	075	04.64	0809.56	210	648	.003 344
014000	095	004	1.0	-1.4	0621.59	084	04.39	0787.19	203	645	.002 121
015000	106	006	-1.7	-5.4	0598.45	076	03.28	0766.20	192	642	.003 129
016000	109	007	-3.5	-10.0	0575.98	066	02.49	0742.67	182	640	.002 125
017000	103	007	-5.5	-12.1	0554.20	059	01.95	0720.13	173	637	.001 014
018000	096	006	-6.8	-12.6	0533.11	063	01.89	0696.25	168	636	.001 359
019000	091	006	-8.1	-14.3	0512.72	061	01.67	0672.80	161	634	.001 334
020000	081	006	-9.2	-17.7	0493.03	050	01.25	0650.10	153	633	.002 332

MANDATORY LEVELS

ALT FT	DIR	KTS	TEMP	D/PT	PRESS	RH
000642	130	014	27.1	23.5	1000.0	081
002133	131	014	25.6	21.7	0950.0	079
003696	130	013	23.3	19.0	0900.0	077
005336	127	012	22.4	17.1	0850.0	072
007060	126	011	18.7	12.2	0800.0	066
008868	127	009	14.6	10.1	0750.0	074
010775	123	005	10.6	5.5	0700.0	071
012783	089	003	4.4	.5	0650.0	076
014900	105	006	-1.6	-5.1	0600.0	077
017156	102	007	-5.8	-12.2	0550.0	060
019596	086	006	-8.7	-16.9	0500.0	052

SIGNIFICANT LEVELS

ALT FT	DIR	KTS	TEMP	D/PT	PRESS	IR
000016	110	002	26.5	24.3	1021.70	390
000225	129	014	27.4	23.6	1014.41	382
004064	129	013	22.7	18.4	0988.77	323
005208	127	012	22.7	17.4	0954.07	308
008313	126	009	15.8	10.6	0765.52	263
011410	118	005	9.2	3.9	0684.48	226
012037	109	004	6.8	2.6	0668.88	220
012618	091	003	5.3	1.5	0654.63	215
013155	084	003	2.9	-1.2	0641.65	208
013824	092	004	1.5	-0.7	0625.73	205
016876	104	007	-5.3	-12.1	0556.85	174
018760	093	006	-7.8	-13.3	0517.55	163

TEST NBR 04834 0MINUS 12 HR DATA

RAWINSONDE RUN AH/GMD-4

CAPE CANAVERAL AFS, FLORIDA

0639Z 09 SEP 1975

ASCENT NBR 0546

ALT FT	DIR DEG	SPD KTS	TEMP DEG C	D/PT DEG C	PRESS MBS	RH PCT	ABHUM G/M3	DENSITY G/M3	IR N	V/S SEC	SHEAR DEG
000016	120	002	25.8	23.5	1021.30	087	20.99	1177.54	385	674	0000 000
001000	127	010	25.8	23.6	0987.44	088	21.06	1138.62	377	674	.013 129
002000	131	010	22.8	22.1	0953.87	096	19.55	1110.97	363	670	.001 210
003000	135	009	20.9	19.6	0921.20	092	16.86	1081.07	341	668	.001 277
004000	134	010	18.8	17.1	0889.38	090	14.52	1052.35	322	666	.001 125
005000	134	010	16.9	15.8	0858.45	093	13.41	1022.87	309	664	.001 140
006000	138	010	15.4	13.4	0828.41	088	11.59	0993.28	292	662	.001 239
007000	141	010	13.1	11.3	0799.19	089	10.14	0963.57	277	659	.001 244
008000	144	009	11.3	9.7	0770.80	089	9.18	0937.69	265	657	.001 270
009000	148	008	9.9	8.1	0743.27	088	8.29	0909.78	254	655	.002 292
010000	151	009	7.8	5.2	0716.54	084	6.85	0884.43	240	653	.002 303
011000	149	007	5.8	3.7	0690.57	086	6.19	0859.80	230	651	.001 026
012000	144	007	4.1	1.5	0665.37	083	5.33	0832.82	219	649	.001 038
013000	140	007	2.0	-1.1	0640.93	080	4.45	0809.90	209	646	.001 017
014000	140	007	.1	-2.9	0617.19	080	3.90	0784.46	200	644	.000 173
015000	140	007	-1.6	-4.4	0594.18	081	3.51	0760.24	192	642	.000 120
016000	137	007	-2.9	-6.3	0571.91	078	3.07	0735.51	184	640	.001 026
017000	129	007	-6.0	-9.7	0550.33	070	2.39	0713.56	175	638	.002 043
018000	117	007	-6.8	-11.6	0529.41	069	2.05	0691.11	167	636	.002 028
019000	103	007	-8.1	-12.4	0509.18	072	1.95	0668.11	162	634	.003 011
020000	094	006	-9.5	-13.9	0489.62	070	1.72	0645.00	155	633	.002 352

MANDATORY LEVELS

ALT FT	DIR DEG	SPD KTS	TEMP DEG C	D/PT DEG C	PRESS MBS	RH
000630	121	009	27.1	24.6	1000.0	086
002114	132	010	22.6	21.9	0950.0	096
003657	135	009	19.4	17.7	0900.0	090
005270	135	010	16.4	15.3	0950.0	093
006960	141	010	13.1	11.3	0900.0	089
008737	147	009	10.4	8.8	0750.0	090
010613	150	007	6.4	3.8	0700.0	084
012599	141	007	2.8	-0.2	0650.0	081
014713	141	007	-1.2	-5.0	0600.0	081
016977	129	007	-6.0	-9.8	0550.0	069
019420	096	006	-8.8	-14.7	0500.0	062

SIGNIFICANT LEVELS

ALT FT	DIR DEG	SPD KTS	TEMP DEG C	D/PT DEG C	PRESS MBS	IR
000016	120	002	25.8	23.5	1021.30	385
000467	118	009	27.7	25.1	1005.65	390
000947	127	010	26.0	23.6	0989.23	378
001746	131	010	23.3	22.7	0962.32	369
005199	134	010	16.5	15.6	0852.40	307
014876	141	007	-1.5	-4.2	0596.99	193

TEST NBR 04834 03717 0-8HR DATA TFSI 3/17

PAWINSONDE RUN AN/GMD-1
CAPE CANAVERAL AFS, FLORIDA
0900Z 09 SEP 1975
ASCENT NBR 0547

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	RH PCT	ATM HUM G/M3	DENSITY G/M3	I/R N	VS KTS	SHEAR /SEC DEG
16	0	0	24.4	21.8	1021.00	85	19.05	1183.82	376	672	0 0
1000	119	7	25.3	24.1	986.93	93	21.87	1138.81	382	673	.012 119
2000	133	7	22.7	20.4	953.34	87	17.60	1111.88	352	670	.003 223
3000	143	6	20.9	16.8	920.62	77	14.19	1081.99	326	668	.002 239
4000	152	6	19.3	14.1	888.81	72	11.95	1051.56	306	666	.002 272
5000	165	5	17.9	12.1	857.94	69	10.54	1020.38	291	665	.003 289
6000	173	4	15.0	8.8	827.93	62	8.50	992.29	273	662	.002 310
7000	158	3	14.0	7.5	798.76	65	7.85	964.27	263	660	.002 37
8000	133	3	12.4	6.0	770.44	65	7.12	935.71	252	658	.002 57
9000	118	4	10.4	5.0	742.96	69	6.68	908.80	244	656	.002 76
10000	115	5	8.2	3.0	716.26	70	5.86	883.35	233	653	.002 102
11000	117	5	6.2	1.6	690.32	72	5.32	857.77	224	651	.001 131
12000	122	6	4.0	-1.1	665.12	76	4.83	833.10	216	649	.001 171
13000	131	7	2.0	-1.2	640.68	79	4.41	808.45	208	646	.002 182
14000	142	8	-0.0	-2.2	616.95	85	4.12	784.46	201	644	.003 184
15000	150	8	-1.9	-3.4	593.95	89	3.80	760.52	194	642	.002 199
16000	151	9	-3.5	-5.6	571.66	85	3.23	736.60	185	640	.000 225
17000	146	8	-5.2	-6.1	550.08	94	3.14	713.35	179	638	.002 19
18000	129	7	-6.7	-7.9	529.18	91	2.75	690.24	172	636	.004 24
19000	104	7	-8.4	-10.6	508.95	84	2.23	668.30	164	634	.005 33
20000	88	8	-9.8	-11.7	489.39	86	2.06	646.14	158	632	.004 26

MANDATORY LEVELS

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	RH PCT
618	119	4	25.0	23.4	1000	91
2098	134	7	22.6	20.0	950	86
3640	149	6	19.8	14.6	900	72
5253	169	4	17.5	10.6	850	64
6945	159	3	14.1	7.6	800	65
8725	120	4	11.1	5.6	750	69
10603	115	5	7.1	2.1	700	71
12590	126	6	2.8	-0.8	650	77
14703	149	8	-1.5	-2.8	600	91
16966	146	8	-5.2	-6.1	550	94
19407	96	8	-9.0	-11.3	500	84

SIGNIFICANT LEVELS

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	I/R N
16	0	0	24.4	21.8	1021.00	376
969	119	7	25.4	24.3	988.00	383
5595	175	4	17.0	8.7	840.00	274
14735	149	8	-1.5	-2.8	600.00	196
21349	77	8	-12.3	-14.6	464.00	149

TEST NBR 04351 04834 0 MINUS 5 HR

RAW INSONDE RUN AN/GMD-1
CAPE CANAVERAL AFS, FLORIDA
1316Z 09 SEP 1975
ASCENT NBR 0548

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	RH PCT	AB HUM G/M3	DENSITY G/M3	I/R N	VS KTS	/SEC	SHEAR DEG
16	100	4	27.2	24.3	1022.40	84	21.89	1172.64	389	675	0	0
1000	81	8	24.4	21.0	988.34	82	18.11	1146.09	362	672	.007	63
2000	74	7	22.0	20.8	954.60	93	18.06	1115.85	356	669	.002	298
3000	66	5	19.9	16.9	921.76	83	14.32	1087.09	328	667	.003	280
4000	59	4	18.8	14.5	889.83	76	12.26	1054.52	309	666	.002	275
5000	62	4	16.9	12.6	858.84	76	10.93	1025.01	294	663	.001	213
6000	72	4	14.9	11.0	828.71	78	9.90	996.39	282	661	.001	142
7000	84	5	12.4	9.2	799.42	81	8.83	969.81	270	658	.002	123
8000	90	6	11.3	7.1	770.97	75	7.70	939.52	257	657	.002	114
9000	94	6	9.5	4.8	743.36	72	6.58	912.21	244	655	.001	189
10000	98	6	7.9	2.8	716.59	70	5.77	884.84	233	653	.001	177
11000	102	6	6.0	1.2	690.61	71	5.17	858.65	224	651	.001	209
12000	120	5	3.9	-0.5	665.40	73	4.62	833.92	215	648	.003	237
13000	148	4	2.2	-2.6	640.94	71	3.99	808.60	206	646	.004	234
14000	172	4	.1	-5.0	617.22	68	3.34	784.81	196	644	.003	253
15000	200	4	-1.8	-7.2	594.19	66	2.84	761.21	188	642	.003	291
16000	222	4	-4.0	-9.0	571.84	68	2.50	738.71	181	639	.003	290
17000	236	4	-6.1	-11.4	550.17	66	2.08	716.50	173	637	.002	309
18000	238	4	-8.1	-12.3	529.17	72	1.95	694.22	168	634	.001	31
19000	227	3	-9.6	-13.3	508.83	74	1.80	671.56	162	632	.002	82
20000	206	1	-11.1	-13.8	489.17	80	1.74	649.32	156	631	.003	56

MANDATORY LEVELS

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	RH PCT
660	84	8	25.4	20.8	1000	76
2135	73	6	21.8	20.3	950	92
3672	61	4	18.8	14.8	900	77
5282	64	4	16.2	12.0	850	76
6968	84	5	12.5	9.2	800	80
8741	93	6	9.9	5.2	750	73
10615	100	6	6.7	1.7	700	70
12600	138	4	2.8	-1.7	650	72
14713	193	4	-1.3	-6.7	600	67
16970	236	4	-6.1	-11.4	550	66
19400	217	2	-10.2	-13.4	500	78
22040	999	999	-16.1	-17.9	450	86

SIGNIFICANT LEVELS

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	I/R N
16	100	4	27.2	24.3	1022.40	389
719	84	8	25.3	20.5	998.00	360
1600	76	7	22.7	22.0	968.00	366
3397	62	5	18.9	15.0	909.00	316
4282	58	4	18.7	14.2	881.00	305
7015	84	5	12.4	9.2	799.00	270
10481	99	6	7.0	1.9	704.00	228
16636	232	4	-5.4	-11.3	558.00	175
21386	55	2	-13.6	-16.1	463.00	148

TEST NBR 04351 04834 0 MINUS 3 HR

RAWINSONDE RUN AN/GMD-1
CAPE CANAVERAL AFS, FLORIDA
1511Z 09 SEP 1975
ASCENT NBR 0549

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	RH PCT	AB HUM G/M3	DENSITY G/M3	I/R N	VS KTS	/SEC	SHEAR DEG
16	80	5	29.0	23.1	1023.00	71	20.34	1167.34	378	677	.0	0
1000	85	11	24.2	22.4	989.01	90	19.79	1146.79	372	672	.010	90
2000	85	10	22.5	19.5	955.26	83	16.64	1115.60	347	670	.002	274
3000	80	9	21.3	17.3	922.50	78	14.53	1082.67	328	668	.002	302
4000	70	8	19.2	15.3	890.65	78	12.92	1053.40	312	666	.003	324
5000	54	8	17.8	13.4	859.71	75	11.42	1022.40	297	665	.004	318
6000	40	8	15.5	11.3	829.64	76	10.09	995.20	283	662	.003	315
7000	37	8	13.3	9.1	800.37	76	8.75	968.05	269	659	.001	341
8000	43	8	11.5	8.2	771.93	81	8.29	939.86	260	657	.001	130
9000	50	7	9.8	6.6	744.34	81	7.52	911.89	250	655	.003	193
10000	60	5	8.1	4.3	717.56	77	6.40	885.09	237	653	.004	210
11000	66	3	5.7	2.3	691.56	79	5.63	860.54	227	651	.003	230
12000	52	2	3.8	.9	666.31	81	5.12	835.02	218	648	.002	271
13000	35	0	1.5	-0.6	641.79	86	4.61	811.35	210	646	.002	236
14000	207	2	-0.3	-3.2	617.98	81	3.82	786.76	200	643	.003	209
15000	228	3	-1.4	-5.1	594.94	76	3.34	760.75	191	642	.002	254
16000	233	4	-3.1	-8.2	572.64	68	2.65	737.19	181	640	.002	243
17000	222	5	-4.0	-11.0	551.06	58	2.12	711.92	172	639	.002	189
18000	203	4	-6.6	-11.7	530.16	67	2.04	691.57	167	636	.003	96
19000	170	3	-8.4	-11.7	509.89	77	2.04	669.80	163	634	.004	72
20000	140	3	-10.3	-12.8	490.27	82	1.89	648.65	157	632	.003	48

MANDATORY LEVELS

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	RH PCT
678	85	10	25.4	22.9	1000	87
2155	84	10	22.4	19.2	950	82
3698	73	9	19.8	15.8	900	78
5311	49	8	17.1	12.7	850	75
7000	37	8	13.3	9.1	800	76
8776	49	7	10.2	7.4	750	82
10651	.65	3	6.6	3.0	700	78
12636	43	1	2.3	-0.0	650	85
14746	222	2	-1.0	-4.3	600	79
17012	221	5	-6.1	-11.0	550	58
19454	156	3	-9.3	-12.1	500	80

SIGNIFICANT LEVELS

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	I/R N
16	80	5	29.0	23.1	1023.00	378
855	85	11	24.5	22.9	994.00	376
5056	53	8	17.8	13.2	858.00	296
13872	204	1	-0.2	-3.2	621.00	201
16956	222	5	-3.9	-11.0	552.00	173
20642	119	3	-11.0	-14.0	478.00	153

TEST NBR 03717 0-15 MIN

RAWINSONDE RUN AN/GMD-1
CAPE CANAVERAL AFS, FLORIDA
1824Z 09 SEP 1975
ASCENT NBR 0550

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	RH PCT	AB HUM G/M3	DEFNSITY G/M3	I/R N	VS KTS	SHEAR /SEC	DFG
16	40	4	28.9	23.3	1021.70	72	20.58	1166.08	379	677	0	0
1000	76	7	24.7	22.0	987.76	85	19.19	1143.71	368	672	.007	198
2000	80	7	22.4	19.9	954.09	86	17.07	1114.30	350	670	.001	140
3000	82	7	20.0	17.4	921.29	85	14.74	1085.90	330	667	.001	178
4000	84	7	18.1	15.8	889.37	87	13.38	1055.72	316	665	.001	143
5000	83	8	16.1	14.9	858.34	92	12.68	1026.02	305	663	.001	65
6000	82	9	14.4	12.0	828.17	86	10.60	997.09	287	661	.001	67
7000	87	8	12.4	9.9	798.86	85	9.28	969.14	273	658	.001	179
8000	95	8	10.5	8.0	770.39	84	8.18	941.24	260	656	.002	204
9000	104	7	9.1	5.9	742.77	80	7.15	912.46	248	654	.003	233
10000	119	5	7.3	3.8	715.99	78	6.20	885.71	236	652	.004	252
11000	142	4	5.6	4.9	690.00	96	6.74	858.40	234	650	.004	259
12000	170	2	3.7	3.7	664.81	100	6.25	832.71	225	648	.003	282
13000	221	2	2.8	1.5	640.41	91	5.35	805.14	213	647	.003	311
14000	284	2	1.2	-2.2	616.79	78	4.14	780.71	200	645	.003	331
15000	299	2	-0.6	-3.5	593.90	81	3.76	756.78	193	643	.001	17
16000	313	1	-2.5	-5.0	571.71	83	3.38	733.96	185	641	.002	108
17000	1	2	-4.5	-5.7	550.18	92	3.23	711.62	180	638	.002	39
18000	16	3	-5.8	-6.1	529.34	98	3.14	687.98	174	637	.003	31
19000	21	5	-7.8	-7.8	509.17	100	2.78	666.76	167	635	.003	30
20000	21	7	-9.2	-10.8	489.64	90	2.28	644.94	159	633	.004	22

MANDATORY LEVELS

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	RH PCT
642	71	6	25.8	22.4	1000	82
2120	80	7	22.1	19.5	950	85
3658	84	7	18.7	16.3	900	86
5264	82	8	15.7	14.0	850	90
6948	86	8	12.4	10.0	800	85
8719	101	7	9.4	6.5	750	82
10590	132	4	6.2	4.2	700	88
12577	195	2	3.1	2.4	650	95
14698	296	2	-0.1	-3.3	600	79
16970	1	2	-4.6	-5.7	550	92
19420	20	6	-8.4	-8.4	500	100

SIGNIFICANT LEVELS

ALTITUDE FEET	DIR DEG	SPEED KTS	TEMP DEG C	DEW PT DEG C	PRESS MBS	I/R N
16	40	4	28.9	23.3	1021.70	379
760	75	7	25.2	22.3	996.00	371
7519	91	8	11.3	8.9	784.00	266
10152	123	5	7.0	3.5	712.00	234
11196	148	3	5.2	5.2	685.00	233
14164	290	2	.9	-2.8	613.00	198
19723	20	6	-8.8	-8.8	495.00	162
20880	23	9	-10.7	-17.2	473.00	148

APPENDIX D

WINDSONDE DATA

TEST NBR. 03717 0-370 MIN
 WINDSONDE
 CAPE CANAVERAL AFS, FLA.
 1233Z 09 SEP 1975
 ASCENT NBR. 0000

TEST NBR. 03717 0 MINUS 265 MIN WINDSONDE
 WINDSONDE
 CAPE CANAVERAL AFS, FLA.
 1414Z 09 SEP 1975
 ASCENT NBR. 0000

ALTITUDE FEET	DIR DEG	SPEED KTS	SHEAR /SEC	DIR
16	45	3	0	0
1000	74	8	.010	89
2000	81	9	.002	131
3000	82	7	.003	257
4000	85	2	.009	261
5000	61	3	.002	22
6000	69	4	.002	94
7000	59	3	.002	274
8000	102	3	.004	161
9000	93	4	.001	49
10000	104	4	.002	150
11000	87	4	.002	351
12000	92	3	.001	238
13000	127	2	.003	236
14000	185	3	.005	225
15000	222	6	.007	249
16000	228	5	.002	1
17000	231	7	.003	239
18000	216	4	.006	68
19000	196	4	.002	103
20000	203	3	.001	318

ALTITUDE FEET	DIR DEG	SPEED KTS	SHEAR /SEC	DIR
16	70	5	0	0
1000	71	11	.010	73
2000	70	10	.001	270
3000	63	7	.005	268
4000	57	7	.001	321
5000	54	5	.004	243
6000	39	6	.003	333
7000	72	5	.005	165
8000	81	2	.004	241
9000	107	5	.005	129
10000	118	7	.004	140
11000	103	5	.004	332
12000	115	2	.005	274
13000	169	3	.006	201
14000	210	6	.006	262
15000	232	6	.004	302
16000	225	6	.001	149
17000	236	8	.003	272
18000	232	8	.001	133
19000	194	6	.008	109
20000	143	4	.008	54

TEST NBR. 03717 0-145 MIN
 WINDSONDE
 CAPE CANAVERAL AFS, FLA.
 1614Z 09 SEP 1975
 ASCENT NBR. 0000

TEST NBR. 03717 0-5 MIN
 WINDSONDE
 CAPE CANAVERAL AFS, FLA.
 1835Z 09 SEP 1975
 ASCENT NBR. 0000

ALTITUDE FEET	DIR DEG	SPEED KTS	SHEAR /SEC	DIR
16	80	5	0	0
1000	76	11	.010	73
2000	84	12	.004	126
3000	77	10	.005	286
4000	79	9	.001	229
5000	79	9	.001	67
6000	56	9	.006	338
7000	57	9	.001	208
8000	45	7	.005	271
9000	63	6	.004	158
10000	97	7	.006	169
11000	87	6	.002	335
12000	112	4	.005	227
13000	119	4	.001	213
14000	239	3	.011	274
15000	261	2	.002	27
16000	239	4	.003	215
17000	260	3	.002	346
18000	269	4	.001	331
19000	240	5	.004	193
20000	326	2	.009	33

ALTITUDE FEET	DIR DEG	SPEED KTS	SHEAR /SEC	DIR
16	0	0	0	0
1000	84	5	.008	84
2000	82	7	.003	79
3000	83	7	.000	116
4000	89	8	.002	122
5000	90	8	.001	116
6000	81	8	.002	338
7000	87	8	.002	140
8000	94	7	.003	243
9000	97	7	.001	127
10000	94	6	.002	294
11000	132	3	.007	245
12000	197	4	.007	246
13000	200	4	.000	257
14000	244	3	.005	333
15000	106	1	.006	74
16000	66	2	.002	38
17000	310	0	.004	256
18000	40	2	.004	49
19000	14	4	.003	342
20000	343	4	.003	270

APPENDIX E

TETROONSONDE DATA

TEST NBR 04834 0-23HR TET/RDR REL PT UCS-8 OLD
 TETROON RUN AH/GMD-4
 CAFE CANAVERAL AFS, FLORIDA
 1939Z 08 SEP 1975
 ASCENT NBR 0000

ALT FT	DIR DEG	SPD KTS	TEMP DEG C	D/PT DEG C	PRESS MBS	RH PCT	DENSITY G/M3	RANGE FEET	AZN DEG	ELV DEG	TIM MIN
000016	120	007	32.0	25.2	1020.30	067	1151.29	0.	0	0	0
000499	130	017	29.3	21.0	1003.77	061	1145.51	14754.	186.04	1.85	.5
000416	120	015	27.7	19.7	1006.64	062	1155.69	14626.	188.18	1.67	1.0
000409	113	013	27.3	19.2	1006.88	061	1157.77	14504.	190.52	1.69	1.5
000411	112	013	27.5	19.5	1006.84	062	1156.80	14557.	193.33	1.70	2.0
000405	114	013	27.3	19.0	1007.07	061	1158.07	14479.	195.60	1.69	2.5
000421	114	013	27.3	18.6	1006.54	059	1157.69	14347.	197.80	1.77	3.0
000535	112	013	27.3	18.6	1002.63	059	1153.16	14115.	202.17	2.25	3.5
000416	109	012	27.7	19.0	1006.76	059	1156.22	14260.	203.07	1.79	4.0
000370	105	012	27.9	19.9	1008.37	058	1157.41	14379.	205.96	1.61	4.5
000490	105	013	27.7	18.8	1004.23	059	1153.39	14473.	208.22	2.03	5.0
000362	105	013	27.3	18.5	1008.68	059	1160.26	14678.	210.95	1.57	5.5
000217	104	013	27.1	18.8	1013.73	060	1166.68	14887.	213.24	1.10	6.0
00006-9	104	013	27.3	18.8	1021.65	060	1175.11	15097.	215.62	.56	6.5
00000-0	103	013	27.1	18.4	1021.34	059	1175.75	15307.	217.84	.56	7.0
000233	103	013	26.7	17.8	1013.19	058	1168.13	15652.	219.92	1.09	7.5
000397	105	013	26.5	17.4	1007.48	057	1162.47	15926.	222.13	1.58	8.0
000665	106	013	26.3	16.9	0998.25	056	1152.76	16361.	224.28	2.41	8.5
000580	106	012	26.0	16.5	1001.22	056	1157.90	16500.	226.09	2.13	9.0
000517	106	013	26.0	16.7	1003.41	057	1160.31	16801.	227.99	1.91	9.5
000526	104	013	26.2	17.5	1003.14	059	1158.84	17212.	229.72	1.89	10.0
000553	104	013	25.8	17.1	1002.24	059	1159.49	17628.	231.37	1.91	10.5
000613	106	013	25.8	16.9	1000.19	058	1157.21	18043.	233.19	2.05	11.0
000696	107	013	26.0	16.4	0997.29	056	1153.36	18465.	234.90	2.26	11.5
000814	107	013	25.4	15.9	0993.34	056	1151.17	18886.	236.63	2.55	12.0
000924	108	013	25.4	15.8	0989.62	055	1146.86	19309.	238.09	2.81	12.5
000989	109	013	24.8	15.0	0987.43	054	1146.85	19708.	239.49	2.94	13.0
001014	110	013	24.7	14.9	0986.62	055	1146.67	20142.	240.84	2.95	13.5
001036	112	014	24.7	14.5	0985.94	053	1146.07	20581.	242.28	2.95	14.0
001074	113	015	24.8	14.6	0984.68	053	1143.87	21040.	243.83	2.99	14.5
001140	113	015	24.5	14.2	0982.50	053	1142.90	21550.	245.34	3.09	15.0
001183	113	015	24.5	13.6	0981.08	051	1141.53	22032.	247.03	3.13	15.5
001197	112	015	24.5	13.2	0980.65	050	1141.18	22593.	248.34	3.10	16.0
001178	111	014	24.7	13.0	0981.36	048	1141.38	23162.	249.58	2.99	16.5
001123	109	014	24.5	13.3	0983.30	050	1144.23	23722.	250.74	2.79	17.0
001076	108	014	24.5	13.1	0984.94	049	1146.28	24280.	251.77	2.63	17.5
001024	107	014	24.3	12.7	0986.78	048	1149.29	24822.	252.67	2.46	18.0
000951	106	014	24.5	12.5	0989.34	047	1151.65	25399.	253.45	2.25	18.5
000943	107	014	24.1	11.8	0989.66	046	1153.76	25995.	254.26	2.19	19.0
001011	107	014	24.7	12.0	0987.39	045	1148.85	26608.	255.13	2.28	19.5
001130	107	014	24.3	11.0	0983.36	043	1145.96	27200.	255.97	2.47	20.0
001207	106	014	24.1	10.3	0980.79	042	1143.93	27806.	256.69	2.57	20.5
001258	105	014	24.5	10.2	0979.09	041	1140.56	28452.	257.44	2.62	21.0
001312	105	014	24.3	10.0	0977.32	040	1139.29	29139.	258.06	2.66	21.5
001348	106	014	23.9	9.5	0976.19	040	1139.53	29801.	258.73	2.67	22.0
001342	108	014	23.7	8.8	0976.46	039	1140.80	30424.	259.32	2.61	22.5
001283	110	014	24.8	9.1	0978.53	037	1138.87	31020.	259.93	2.46	23.0
001258	113	014	24.1	7.9	0979.45	036	1143.18	31649.	260.64	2.37	23.5
001281	116	015	24.5	6.5	0978.72	032	1141.35	32248.	261.33	2.38	24.0
001357	117	015	25.8	7.3	0976.21	031	1133.20	32852.	262.10	2.47	24.5
001398	118	015	24.7	5.9	0974.90	030	1136.34	33471.	262.92	2.49	25.0
001390	118	014	24.5	5.8	0975.22	030	1137.47	34078.	263.64	2.44	25.5
001340	118	014	24.7	6.1	0977.00	030	1138.74	34689.	264.29	2.32	26.0

CAFE CANAVERAL AFS, FLORIDA

19392 08 SEP 1975

ASCENT HBR 0000

ALT FT	DIR DEG	SPD KTS	TEMP DEG C	D/PT DEG C	PRESS HBS	RH PCT	DENSITY G/M3	RANGE FEET	AZM DEG	ELV DEG	TIM MIN
001289	117	014	24.7	6.1	0978.80	030	1140.55	35281.	264.92	2.21	26.5
001281	117	013	25.0	6.4	0979.14	030	1139.73	35844.	265.50	2.16	27.0
001272	117	013	27.3	8.4	0979.50	030	1130.89	36403.	266.05	2.12	27.5
001290	117	014	26.2	7.2	0978.94	030	1134.97	36983.	266.58	2.11	28.0
001289	117	014	24.5	5.6	0979.04	030	1142.00	37563.	267.09	2.08	28.5
001313	116	014	24.7	5.5	0978.29	029	1140.42	38200.	267.65	2.09	29.0
001352	115	013	24.3	5.0	0977.04	029	1140.52	38827.	268.13	2.11	29.5
001402	114	013	24.5	4.9	0975.43	028	1137.93	39426.	268.57	2.15	30.0
001427	113	013	23.9	4.0	0974.62	027	1139.34	40021.	268.98	2.15	30.5
001438	112	013	23.7	4.1	0974.32	028	1139.67	40603.	269.31	2.14	31.0
001452	112	013	24.3	4.3	0973.92	027	1137.03	41198.	269.61	2.13	31.5
001453	113	014	23.6	3.5	0973.96	027	1140.09	41802.	269.93	2.10	32.0
001468	114	015	23.6	3.5	0973.53	027	1139.59	42462.	270.38	2.09	32.5
001551	113	015	23.9	3.6	0970.80	027	1134.97	43188.	270.81	2.16	33.0
001713	111	016	22.8	2.7	0965.40	027	1133.00	43944.	271.24	2.32	33.5
001861	108	015	23.7	4.1	0960.50	028	1123.45	44710.	271.57	2.46	34.0
001989	105	014	22.7	4.0	0956.31	030	1122.66	45499.	271.86	2.57	34.5
002044	103	014	22.1	3.7	0954.55	030	1122.68	46117.	271.97	2.60	35.0
002100	102	013	22.7	4.0	0952.78	030	1118.50	46791.	272.04	2.63	35.5
002133	105	013	22.5	4.0	0951.81	030	1118.03	47485.	272.19	2.63	36.0
002150	109	013	23.0	4.3	0951.34	030	1115.36	48108.	272.34	2.61	36.5
002170	113	013	22.7	4.0	0950.79	030	1116.16	48747.	272.58	2.60	37.0
002163	116	014	24.5	5.6	0951.14	030	1109.34	49374.	272.92	2.56	37.5
002158	116	014	24.7	5.9	0951.40	030	1108.85	50002.	273.26	2.52	38.0
002153	115	014	24.1	4.6	0951.67	028	1111.59	50671.	273.62	2.49	38.5
002087	113	015	24.7	5.3	0953.96	029	1112.01	51412.	273.96	2.39	39.0
001964	110	014	25.2	5.8	0958.16	029	1114.70	52078.	274.16	2.23	39.5
001824	110	014	25.0	5.8	0962.93	029	1120.97	52811.	274.35	2.05	40.0
001768	111	014	25.2	6.6	0964.88	030	1122.31	53524.	274.51	1.97	40.5
001728	114	014	25.4	6.9	0966.33	031	1123.20	54174.	274.73	1.90	41.0
001669	116	014	25.4	7.1	0968.39	031	1125.55	54826.	274.99	1.82	41.5
001608	119	014	25.6	8.3	0970.50	033	1126.93	55459.	275.27	1.75	42.0
001554	121	014	26.0	8.7	0972.41	033	1127.62	56186.	275.61	1.67	42.5
001523	122	014	26.0	8.5	0973.52	033	1128.96	56855.	275.94	1.62	43.0
001489	125	014	25.8	9.9	0974.77	037	1130.67	57487.	276.26	1.57	43.5
001479	127	013	25.8	9.6	0975.16	036	1131.22	58068.	276.58	1.54	44.0
001473	128	013	25.8	9.4	0975.44	036	1131.60	58590.	276.91	1.53	44.5
001434	127	013	26.0	9.2	0976.83	035	1132.60	59134.	277.24	1.48	45.0
001427	125	013	26.2	9.6	0977.14	035	1132.08	59652.	277.57	1.46	45.5
001408	122	013	25.6	9.5	0977.84	036	1135.08	60246.	277.86	1.43	46.0
001389	120	013	25.6	9.5	0978.58	036	1135.94	60989.	278.09	1.40	46.5
001366	119	013	25.6	10.0	0979.42	037	1136.77	61597.	278.33	1.37	47.0
001345	119	012	25.6	10.8	0980.19	040	1137.35	62212.	278.50	1.34	47.5
001346	118	012	26.0	11.2	0980.23	040	1135.83	62759.	278.71	1.32	48.0
001340	117	011	25.8	11.1	0980.50	040	1136.88	63322.	278.90	1.30	48.5
001349	114	011	25.8	11.2	0980.26	040	1136.56	63833.	279.03	1.30	49.0
001359	111	012	25.4	10.4	0979.98	039	1137.97	64353.	279.19	1.30	49.5
001362	109	012	25.6	10.2	0979.98	038	1137.33	64905.	279.26	1.29	50.0
001370	109	013	25.4	10.0	0979.77	038	1137.87	65584.	279.31	1.29	50.5
001379	111	014	25.4	10.2	0979.51	038	1137.51	66274.	279.37	1.28	51.0
001392	115	014	25.2	10.2	0979.14	039	1137.77	66966.	279.52	1.28	51.5
001407	117	015	25.2	10.0	0978.73	038	1137.38	67714.	279.72	1.28	52.0
001416	118	015	25.2	9.6	0978.46	037	1137.20	68405.	279.96	1.27	52.5
001425	118	014	25.4	10.3	0978.24	039	1135.99	69101.	280.15	1.27	53.0
001443	117	014	26.0	11.0	0977.70	039	1132.93	69810.	280.31	1.27	53.5
001441	118	015	26.0	11.5	0977.85	040	1132.92	70487.	280.49	1.25	54.0
001458	119	015	26.2	12.4	0977.34	042	1131.25	71176.	280.65	1.25	54.5
001480	121	015	26.3	13.4	0976.67	045	1129.33	71906.	280.83	1.25	55.0
001505	122	016	26.3	13.4	0975.91	045	1128.45	72649.	281.06	1.24	55.5
001519	122	016	26.3	13.5	0975.52	045	1127.92	73408.	281.32	1.24	56.0
001534	122	015	26.3	13.7	0975.07	046	1127.33	74150.	281.53	1.24	56.5
001550	121	014	26.3	13.1	0974.61	044	1127.05	74911.	281.76	1.24	57.0
001554	120	014	26.3	12.3	0974.56	042	1127.35	75555.	281.92	1.23	57.5
001575	119	013	26.2	12.3	0973.93	042	1127.32	76179.	282.04	1.24	58.0
001628	118	014	26.2	11.7	0972.23	040	1125.60	76750.	282.21	1.27	58.5
001694	118	014	26.2	11.8	0970.09	041	1123.07	77431.	282.34	1.31	59.0
001749	999	999	26.2	12.2	0968.35	042	1120.87	78163.	282.43	1.33	59.5
001768	999	999	25.8	11.5	0967.82	041	1121.94	78924.	282.61	1.33	60.0

0001 TEST NBR 04834 TETROON
 0002 TETROON RUN AN/GMD-4
 0003 CAPE CANAVERAL AFS, FLORIDA
 0004 1107Z 09 SEP 1975
 0005 ASCENT NBR 0000
 0006 ALT DIR SPD TEMP D/PT PRESS RH DENSITY RANGE AZM ELEV TIM
 0007 FT DEG KTS DEG C DEG C MBS PCT G/M3 FEET DEG DEG MIN
 0008 000016 018 003 25.8 22.6 1021.70 083 1170.67 0. 0 0 0 0
 0009 000215 098 005 26.2 24.4 1014.73 090 1167.79 15577. 183.91 .71 .5
 0010 000412 068 006 26.3 24.6 1007.91 090 1158.99 15485. 184.78 1.40 1.0
 0011 000408 055 007 26.0 24.0 1008.06 089 1161.06 15867. 185.79 1.35 1.5
 0012 000422 048 008 26.0 23.8 1007.60 088 1160.66 16168. 186.64 1.39 2.0
 0013 000408 047 009 25.6 23.3 1008.12 087 1163.01 16567. 188.03 1.31 2.5
 0014 000450 048 008 25.4 23.2 1006.68 087 1162.17 16804. 188.38 1.45 3.0
 0015 000472 051 008 25.2 22.8 1005.93 086 1162.28 17181. 189.42 1.50 3.5
 0016 000489 055 008 25.2 22.7 1005.37 086 1161.68 17459. 190.21 1.53 4.0
 0017 000529 060 008 24.9 22.3 1004.00 086 1161.76 17729. 191.19 1.64 4.5
 0018 000548 063 008 24.9 22.2 1003.38 085 1161.14 17971. 192.20 1.68 5.0
 0019 000610 066 008 24.9 22.1 1001.26 085 1158.71 18240. 193.30 1.85 5.5
 0020 000662 068 009 24.5 22.0 0999.50 086 1158.11 18511. 194.37 1.99 6.0
 0021 000809 071 009 24.5 21.9 0994.45 086 1152.23 18707. 195.29 2.41 6.5
 0022 000800 074 009 24.4 21.8 0994.83 086 1153.48 19052. 196.68 2.34 7.0
 0023 000965 075 009 24.4 21.8 0989.18 086 1146.87 19270. 197.77 2.81 7.5
 0024 001054 077 009 24.4 21.7 0986.21 085 1143.42 19412. 198.69 3.05 8.0
 0025 001020 076 009 24.2 21.3 0987.40 084 1145.81 19649. 199.79 2.92 8.5
 0026 001019 076 010 24.2 21.1 0987.50 083 1146.06 19989. 201.13 2.86 9.0
 0027 001061 077 010 24.0 20.9 0986.11 083 1145.21 20315. 202.36 2.94 9.5
 0028 001163 077 009 24.0 21.3 0982.68 085 1140.96 20527. 203.29 3.19 10.0
 0029 001219 078 009 23.6 21.0 0980.84 085 1140.35 20822. 204.39 3.29 10.5
 0030 001241 079 009 23.5 20.6 0980.14 084 1140.44 21125. 205.44 3.31 11.0
 0031 001248 080 009 23.3 20.5 0979.98 084 1141.00 21401. 206.42 3.28 11.5
 0032 001223 081 009 23.3 20.2 0980.89 083 1142.26 21662. 207.41 3.18 12.0
 0033 001242 082 009 23.3 19.7 0980.32 080 1141.93 21942. 208.38 3.19 12.5
 0034 001260 082 009 23.3 19.5 0979.75 079 1141.34 22215. 209.33 3.20 13.0
 0035 001286 082 009 23.1 19.1 0978.95 078 1141.34 22481. 210.22 3.23 13.5
 0036 001333 083 009 23.3 19.2 0977.39 078 1138.80 22737. 211.07 3.31 14.0
 0037 001382 083 009 23.3 18.9 0975.80 076 1136.42 23006. 211.88 3.39 14.5
 0038 001443 083 009 24.0 19.3 0973.79 075 1131.84 23290. 212.72 3.50 15.0
 0039 001490 085 009 24.2 19.5 0972.29 075 1129.28 23589. 213.61 3.57 15.5
 0040 001543 086 009 23.6 19.0 0970.59 075 1129.58 23875. 214.42 3.65 16.0
 0041 001555 086 009 24.4 19.6 0970.25 075 1126.15 24132. 215.26 3.64 16.5
 0042 001527 086 008 23.3 18.2 0971.27 073 1132.15 24399. 216.07 3.54 17.0
 0043 001464 086 008 24.0 19.0 0973.47 074 1131.62 24678. 216.79 3.36 17.5
 0044 001416 085 008 23.6 18.6 0975.17 073 1135.19 24946. 217.49 3.21 18.0
 0045 001384 084 008 24.2 19.2 0976.34 074 1134.17 25200. 218.17 3.10 18.5
 0046 001353 082 008 23.1 18.5 0977.46 075 1139.94 25514. 218.88 2.99 19.0
 0047 001349 081 008 23.1 18.3 0977.65 074 1140.29 25828. 219.50 2.95 19.5
 0048 001320 080 008 23.1 18.3 0978.70 074 1141.52 26158. 220.08 2.85 20.0
 0049 001323 080 008 23.3 18.4 0978.68 074 1140.77 26451. 220.63 2.82 20.5
 0050 001337 079 008 23.3 18.3 0978.26 073 1140.36 26751. 221.12 2.82 21.0
 0051 001359 078 008 23.5 18.3 0977.59 073 1138.89 27057. 221.67 2.84 21.5
 0052 001386 077 008 24.7 19.0 0976.73 070 1132.74 27344. 222.13 2.86 22.0
 0053 001402 075 008 23.3 17.3 0976.27 069 1138.54 27688. 222.57 2.86 22.5
 0054 001361 074 008 23.1 17.6 0977.72 071 1140.76 28017. 222.98 2.75 23.0
 0055 001351 074 008 23.1 18.2 0978.16 074 1140.92 28358. 223.39 2.69 23.5
 0056 001366 074 008 22.9 18.4 0977.68 075 1140.95 28691. 223.77 2.69 24.0
 0057 001361 074 007 23.3 18.7 0977.93 076 1139.70 29028. 224.12 2.64 24.5
 0058 001350 075 007 23.3 18.5 0978.38 074 1140.36 29338. 224.50 2.59 25.0

TETROONSONDE, 9 SEPT. 1975, 1107Z, Cont'd.

	ALT FT	DIR DEG	SPD KTS	TEMP DEG C	D/PT DEG C	PRESS MBS	RH PCT	DENSITY G/M3	RANGE FEET	AZM DEG	ELV DEG	TIM MIN
0059	001338	075	007	23.3	18.2	0978.86	073	1141.12	29674.	224.89	2.54	25.5
0060	001331	075	007	23.3	18.0	0979.17	072	1141.56	29946.	225.22	2.51	26.0
0061	001305	074	008	23.3	17.9	0980.12	072	1142.77	30297.	225.58	2.43	26.5
0062	001285	074	008	23.3	17.7	0980.85	071	1143.71	30646.	225.92	2.37	27.0
0063	001259	074	008	23.3	17.8	0981.82	071	1144.84	31021.	226.26	2.29	27.5
0064	001226	076	008	23.3	18.1	0983.02	073	1146.04	31368.	226.61	2.20	28.0
0065	001200	077	008	23.6	18.3	0983.96	072	1145.68	31713.	226.94	2.13	28.5
0066	001196	078	008	23.5	18.0	0984.16	072	1146.74	32068.	227.37	2.10	29.0
0067	001225	078	008	23.3	17.9	0983.23	072	1146.40	32408.	227.73	2.13	29.5
0068	001269	078	008	23.6	18.2	0981.78	072	1143.18	32763.	228.11	2.18	30.0
0069	001292	077	008	23.5	17.9	0981.07	071	1143.18	33095.	228.42	2.20	30.5
0070	001257	077	008	23.8	17.9	0982.33	070	1143.29	33470.	228.75	2.11	31.0
0071	001230	077	008	23.6	17.7	0983.32	069	1145.28	33833.	229.09	2.05	31.5
0072	001267	076	008	23.8	17.6	0982.11	068	1143.23	34190.	229.40	2.09	32.0
0073	001370	076	008	23.8	17.4	0978.65	067	1139.27	34537.	229.71	2.23	32.5
0074	001407	076	008	23.8	17.0	0977.48	066	1138.11	34892.	229.94	2.27	33.0
0075	001370	075	008	23.8	17.0	0978.79	066	1139.66	35232.	230.23	2.19	33.5
0076	001327	074	008	23.6	16.5	0980.32	064	1142.38	35582.	230.54	2.10	34.0
0077	001274	073	008	24.4	17.0	0982.21	064	1141.64	35929.	230.77	2.00	34.5
0078	001238	072	008	24.5	17.1	0983.51	063	1142.43	36341.	230.99	1.92	35.0
0079	001215	072	008	25.1	17.3	0984.33	062	1141.21	36728.	231.21	1.87	35.5
0080	001193	073	008	24.5	17.4	0985.17	065	1144.20	37120.	231.42	1.81	36.0
0081	001171	074	008	25.2	18.0	0985.98	064	1142.05	37493.	231.67	1.76	36.5
0082	001157	074	008	24.5	17.0	0986.50	063	1145.96	37873.	231.91	1.72	37.0
0083	001131	075	008	24.7	17.4	0987.46	064	1146.19	38278.	232.17	1.66	37.5
0084	001132	076	008	25.2	17.6	0987.48	063	1144.03	38660.	232.38	1.65	38.0
0085	001132	077	009	24.9	16.8	0987.51	061	1145.90	39039.	232.64	1.63	38.5
0086	001129	077	009	23.8	15.5	0987.67	060	1150.85	39436.	232.89	1.61	39.0
0087	001135	077	009	25.2	17.0	0987.54	060	1144.46	39841.	233.19	1.61	39.5
0088	001165	077	009	24.0	15.5	0986.57	059	1148.88	40284.	233.45	1.63	40.0
0089	001178	077	009	25.1	16.6	0986.18	059	1143.75	40702.	233.74	1.64	40.5
0090	001199	076	009	24.7	15.9	0985.53	058	1144.74	41149.	233.96	1.64	41.0
0091	001205	077	009	24.9	16.1	0985.38	058	1143.78	41541.	234.19	1.64	41.5
0092	001223	077	009	26.2	17.3	0984.82	058	1137.64	41954.	234.43	1.64	42.0
0093	001244	078	009	24.9	15.6	0984.17	056	1142.58	42354.	234.64	1.65	42.5
0094	001265	077	009	24.5	15.4	0983.51	057	1143.29	42728.	234.89	1.67	43.0
0095	001292	077	008	24.7	15.8	0982.67	058	1141.41	43148.	235.12	1.69	43.5
0096	001311	076	008	24.7	16.0	0982.08	058	1140.66	43556.	235.31	1.70	44.0
0097	001302	076	008	24.5	15.9	0982.44	059	1141.81	43949.	235.47	1.67	44.5
0098	001259	077	009	24.5	15.6	0983.99	057	1143.77	44341.	235.70	1.60	45.0
0099	001204	076	009	24.2	14.5	0985.92	055	1147.93	44732.	235.90	1.52	45.5
0100	001192	076	009	24.9	15.7	0986.41	057	1145.18	45170.	236.11	1.49	46.0
0101	001241	078	009	24.4	14.5	0984.77	054	1145.87	45620.	236.27	1.53	46.5
0102	001265	079	009	25.4	15.5	0984.04	054	1140.41	46051.	236.48	1.55	47.0
0103	001287	080	009	24.0	14.0	0983.35	053	1145.84	46450.	236.72	1.56	47.5
0104	001294	079	010	25.8	15.5	0983.18	053	1138.05	46903.	237.02	1.56	48.0
0105	001308	077	010	24.7	14.4	0982.75	053	1142.22	47336.	237.23	1.56	48.5
0106	001306	074	010	24.9	14.7	0982.91	053	1141.55	47854.	237.38	1.54	49.0
0107	001299	073	010	26.0	15.7	0983.21	053	1137.30	48352.	237.56	1.52	49.5
0108	001302	073	010	24.0	13.6	0983.14	052	1145.76	48863.	237.71	1.50	50.0
0109	001305	074	010	23.8	13.3	0983.13	052	1146.57	49308.	237.84	1.50	50.5
0110	001314	075	009	23.8	13.2	0982.88	051	1146.31	49821.	237.99	1.49	51.0

TETROONSONDE, 9 SEPT. 1975, 1107Z, Cont'd.

	ALT FT	DIR DEG	SPD KTS	TEMP DEG C	D/PT DEG C	PRESS MBS	RH PCT	DENSITY G/M3	RANGE FEET	AZM DEG	ELV DEG	TIM MIN
0111	001324	076	009	24.0	13.5	0982.61	052	1145.18	50253.	238.18	1.49	51.5
0112	001334	076	009	24.2	13.6	0982.33	052	1144.11	50666.	238.33	1.49	52.0
0113	001344	076	009	24.7	14.1	0982.07	052	1141.55	51079.	238.49	1.49	52.5
0114	001356	076	010	25.6	14.9	0981.73	052	1137.32	51550.	238.65	1.48	53.0
0115	001369	077	010	24.4	13.9	0981.34	052	1142.14	52036.	238.81	1.48	53.5
0116	001376	078	010	24.0	13.5	0981.16	052	1143.48	52503.	238.97	1.48	54.0
0117	001407	079	010	27.5	16.8	0980.20	052	1127.65	52983.	239.14	1.50	54.5
0118	001470	079	010	26.5	16.7	0978.14	055	1128.77	53418.	239.34	1.54	55.0
0119	001496	078	010	24.7	15.3	0977.32	056	1135.43	53983.	239.62	1.55	55.5
0120	001499	075	010	24.7	14.4	0977.31	053	1135.84	54335.	239.69	1.55	56.0
0121	001507	073	010	24.5	13.4	0977.13	050	1136.75	54848.	239.82	1.54	56.5
0122	001513	072	010	24.2	13.2	0976.99	050	1138.04	55341.	239.91	1.54	57.0
0123	001491	072	010	24.2	12.9	0977.81	049	1139.16	55829.	240.01	1.50	57.5
0124	001458	073	010	25.6	14.6	0979.01	050	1134.32	56335.	240.16	1.46	58.0
0125	001419	074	009	26.2	15.1	0980.38	051	1133.61	56818.	240.22	1.40	58.5
0126	001432	074	009	24.7	13.6	0980.03	050	1139.39	57245.	240.37	1.40	59.0
0127	001402	999	999	26.3	15.1	0981.12	050	1133.74	57667.	240.48	1.37	59.5
0128	001551	999	999	27.1	16.0	0976.18	051	1124.79	58095	240.56	1.49	60.0

0001	TEST NBR 04834 TET/REL T PLUS 2HR REL/PT YEA STA	OLD	OLD	OL								
0002	TETRDON RUN AN/GMD-4											
0003	CAPE CANAVERAL AFS, FLORIDA											
0004	1945Z 09 SEP 1975											
0005	ASCENT NBR 0000											
0006	ALT	DIR	SPD	TEMP	D/PT	PRESS	RH	DENSITY	RANGE	AZM	ELV	TIM
0007	FT	DEG	KTS	DEG C	DEG C	MBS	PCT	G/M3	FEET	DEG	DEG	MIN
0008	000016	030	004	23.1	21.5	1021.30	091	1189.45	0.	0	0	0
0009	000142	049	003	21.9	21.5	1016.82	098	1189.11	47113.	171.76	.09	8.5
0010	000350	052	004	21.6	21.1	1009.49	097	1182.09	47133.	172.47	.34	9.0
0011	000462	061	010	22.1	21.2	1005.55	095	1175.30	47303.	172.95	.48	9.5
0012	000614	060	011	22.8	21.0	1000.28	090	1166.49	47583.	173.73	.65	10.0
0013	000814	061	012	23.3	19.9	0993.39	081	1157.04	47899.	174.52	.89	10.5
0014	001006	062	010	22.4	19.9	0986.77	099	1162.97	48101.	175.09	1.11	11.0
0015	001193	066	009	22.3	19.1	0980.38	082	1146.32	48318.	175.67	1.33	11.5
0016	001363	070	008	21.8	19.9	0974.63	099	1151.36	48451.	176.12	1.53	12.0
0017	001524	075	008	20.9	18.8	0969.18	088	1138.57	49516.	176.55	1.72	12.5
0018	001693	079	008	20.2	19.9	0963.51	099	1144.16	48563.	177.02	1.91	13.0
0019	001840	079	008	20.2	19.5	0958.64	096	1128.23	48611.	177.51	2.08	13.5
0020	001948	078	008	20.2	19.3	0955.08	094	1124.15	48640.	177.94	2.21	14.0
0021	002046	074	008	19.9	19.9	0951.89	099	1131.66	48712.	178.39	2.32	14.5
0022	002147	069	008	19.6	19.9	0948.59	099	1129.02	48832.	178.87	2.43	15.0
0023	002281	064	008	19.2	18.2	0944.21	094	1115.72	48965.	179.31	2.58	15.5
0024	002442	057	009	18.9	17.8	0938.97	094	1110.93	49172.	179.76	2.76	16.0
0025	002605	050	009	18.4	19.9	0933.70	099	1115.70	49438.	180.17	2.93	16.5
0026	002762	045	010	17.9	17.0	0928.63	095	1102.76	49722.	180.59	3.10	17.0
0027	002905	042	010	13.4	19.9	0924.02	099	1123.57	50198.	180.96	3.23	17.5
0028	003002	042	009	9.1	7.8	0920.92	092	1131.86	50587.	181.31	3.31	18.0
0029	003106	043	009	17.3	15.5	0917.62	089	1092.81	50971.	181.70	3.40	18.5
0030	003162	045	008	17.4	15.7	0915.97	089	1090.14	51255.	181.98	3.44	19.0
0031	003200	046	008	17.4	16.0	0914.90	091	1088.70	51535.	182.30	3.47	19.5
0032	003219	047	008	17.3	15.9	0914.43	092	1088.78	51820.	182.61	3.47	20.0
0033	003219	047	009	17.3	15.9	0914.59	092	1088.97	52117.	182.94	3.45	20.5
0034	003205	046	009	17.1	15.9	0915.23	093	1090.34	52439.	183.28	3.41	21.0
0035	003189	046	009	17.3	16.1	0915.90	093	1090.44	52774.	183.61	3.37	21.5
0036	003188	045	010	17.4	16.3	0916.11	093	1089.98	53154.	183.99	3.34	22.0
0037	003189	044	010	17.6	16.7	0916.23	094	1089.31	53518.	184.31	3.32	22.5
0038	003208	043	010	17.4	16.5	0915.79	094	1089.51	53914.	184.67	3.32	23.0
0039	003222	043	010	17.3	19.9	0915.48	099	1098.20	54319.	184.98	3.31	23.5
0040	003243	043	010	17.3	16.4	0914.96	094	1089.17	54747.	185.31	3.30	24.0
0041	003274	044	010	17.3	16.3	0914.13	094	1088.20	55157.	185.64	3.31	24.5
0042	003292	045	009	17.3	16.2	0913.63	093	1087.76	55549.	185.97	3.30	25.0
0043	003295	045	009	17.3	15.6	0913.76	090	1088.13	55903.	186.27	3.28	25.5
0044	003286	046	009	17.3	19.9	0914.23	099	1096.70	56231.	186.55	3.25	26.0
0045	003288	046	008	17.3	15.	0914.33	088	1089.00	56559.	186.83	3.24	26.5
0046	003295	045	008	17.1	15.5	0914.26	090	1089.39	56866.	187.06	3.23	27.0
0047	003285	046	008	17.1	15.9	0914.77	093	1089.77	57213.	187.34	3.19	27.5
0048	003216	046	008	17.3	16.2	0917.20	094	1091.92	57534.	187.59	3.11	28.0
0049	003087	046	009	17.1	16.1	0921.55	094	1097.85	57868.	187.85	2.96	28.5
0050	002960	047	009	17.1	16.0	0925.90	093	1103.10	58207.	188.11	2.82	29.0
0051	002838	050	010	17.6	16.8	0930.06	095	1105.04	58583.	188.39	2.68	29.5
0052	002777	052	010	17.6	16.8	0932.21	093	1108.41	58989.	188.74	2.60	30.0
0053	002717	055	010	17.7	16.8	0934.36	094	1110.34	59341.	189.09	2.53	30.5
0054	002670	058	010	17.7	16.8	0936.04	094	1112.35	59679.	189.44	2.47	31.0
0055	002648	059	010	13.8	19.9	0936.92	099	1137.43	60018.	189.84	2.43	31.5
0056	002649	057	009	10.1	9.2	0937.02	094	1147.13	60357.	190.24	2.43	32.0
0057	002667	051	009	18.2	17.5	0936.54	096	1110.70	60630.	190.56	2.43	32.5
0058	002697	045	008	18.2	17.7	0935.70	097	1109.61	60933.	190.77	2.44	33.0

TETROONSONDE, 9 SEPT. 1975, 1945Z, Cont'd.

	ALT FT	DIR DEG	SPD KTS	TEMP DEG C	D/PT DEG C	PRESS MBS	RH PCT	DENSITY G/M3	RANGE FEET	AZM DEG	ELY DEG	TIM MIN
0059	002724	040	008	13.8	13.1	0934.95	096	1128.11	61281.	190.92	2.45	33.5
0060	002749	037	009	9.7	8.9	0934.24	095	1145.55	61693.	191.07	2.46	34.0
0061	002785	038	009	17.7	17.1	0933.17	096	1108.75	62098.	191.26	2.47	34.5
0062	002822	038	010	17.6	17.0	0932.09	096	1108.14	62508.	191.46	2.49	35.0
0063	002850	038	010	17.6	16.9	0931.29	096	1107.24	63019.	191.67	2.49	35.5
0064	002877	039	010	17.6	99.9	0930.56	999	1115.06	63434.	191.90	2.50	36.0
0065	002871	041	010	17.7	17.1	0930.90	096	1106.06	63840.	192.06	2.49	36.5
0066	002904	043	010	17.7	99.9	0929.97	999	1113.73	64261.	192.24	2.49	37.0
0067	002935	046	010	17.7	16.6	0929.07	093	1104.14	64704.	192.49	2.51	37.5
0068	003001	048	010	17.9	17.3	0927.06	096	1100.71	65143.	192.77	2.54	38.0
0069	003032	048	010	17.9	17.5	0926.19	098	1099.55	65497.	193.02	2.55	38.5
0070	003057	047	009	17.9	17.5	0925.53	098	1098.76	65855.	193.27	2.56	39.0
0071	003083	046	009	17.9	99.9	0924.85	999	1106.98	66329.	193.48	2.56	39.5
0072	003107	047	009	18.1	99.9	0924.21	999	1105.59	66694.	193.68	2.58	40.0
0073	003132	049	009	18.2	18.0	0923.54	099	1094.88	67093.	193.91	2.58	40.5
0074	003145	050	010	18.4	99.9	0923.26	999	1103.23	67468.	194.14	2.57	41.0
0075	003152	051	010	18.4	99.9	0923.21	999	1103.16	67877.	194.40	2.57	41.5
0076	003180	051	010	18.7	18.6	0922.45	099	1091.37	68292.	194.69	2.58	42.0
0077	003210	050	010	18.7	99.9	0921.64	999	1100.05	68722.	194.95	2.57	42.5
0078	003194	050	010	18.7	99.9	0922.33	999	1100.87	69134.	195.20	2.56	43.0
0079	003197	051	010	18.9	18.5	0922.39	098	1090.76	69581.	195.40	2.54	43.5
0080	003235	053	010	18.7	18.4	0921.31	098	1090.15	69933.	195.61	2.55	44.0
0081	003273	055	010	18.7	18.5	0920.25	098	1088.86	70370.	195.89	2.56	44.5
0082	003332	056	011	18.7	18.5	0918.51	098	1086.77	70740.	196.17	2.59	45.0
0083	003373	058	011	18.6	18.5	0917.34	100	1085.96	71149.	196.43	2.61	45.5
0084	003434	057	011	15.7	99.9	0915.54	999	1104.31	71600.	196.74	2.64	46.0
0085	003511	055	012	13.1	99.9	0913.15	999	1111.52	71968.	197.05	2.70	46.5
0086	003526	054	012	10.4	10.2	0912.86	099	1115.88	72426.	197.36	2.69	47.0
0087	003528	053	013	18.6	18.6	0912.95	100	1080.69	73020.	197.59	2.66	47.5
0088	003562	054	013	18.9	18.9	0912.05	100	1078.20	73585.	197.91	2.66	48.0
0089	003592	055	013	18.7	18.7	0911.26	100	1077.96	74122.	198.20	2.67	48.5
0090	003640	056	012	18.7	99.9	0909.92	999	1086.06	74584.	198.53	2.69	49.0
0091	003660	054	012	18.7	99.9	0909.45	999	1085.50	75107.	198.79	2.70	49.5
0092	003728	053	013	18.7	99.9	0907.45	999	1083.11	75560.	199.10	2.73	50.0
0093	003752	051	013	18.7	99.9	0906.85	999	1082.40	76101.	199.34	2.73	50.5
0094	003774	050	014	18.7	99.9	0906.34	999	1081.79	76732.	199.56	2.72	51.0
0095	003819	052	014	18.9	18.8	0905.08	100	1069.91	77305.	199.87	2.73	51.5
0096	003856	054	014	19.1	18.9	0904.09	099	1068.07	78041.	200.13	2.72	52.0
0097	003842	056	014	18.9	18.9	0904.73	100	1069.47	78585.	200.45	2.69	52.5
0098	003795	059	013	19.1	19.1	0906.44	100	1070.80	79157.	200.75	2.63	53.0
0099	003832	060	013	19.4	19.2	0905.46	099	1068.32	79633.	201.07	2.64	53.5
0100	003801	061	013	19.7	99.9	0906.65	999	1070.49	80161.	201.38	2.60	54.0
0101	003753	062	013	17.6	99.9	0908.38	999	1088.47	80660.	201.64	2.57	54.5
0102	003742	064	013	15.5	99.9	0908.94	999	1096.95	81145.	201.94	2.55	55.0
0103	003757	065	014	13.7	13.0	0908.65	096	1096.81	81639.	202.25	2.54	55.5
0104	003831	066	015	11.7	10.9	0906.41	093	1102.51	82152.	202.60	2.56	56.0
0105	003917	067	015	19.9	19.2	0903.82	096	1064.56	82739.	203.01	2.60	56.5
0106	004002	066	015	19.9	18.9	0901.34	094	1061.80	83306.	203.36	2.63	57.0
0107	004085	064	014	19.7	18.5	0898.90	092	1059.76	83814.	203.75	2.67	57.5
0108	004170	061	014	19.7	18.5	0896.45	092	1056.84	84406.	204.05	2.71	58.0
0109	004261	059	014	19.6	18.3	0893.79	092	1054.41	84973.	204.30	2.75	58.5
0110	004388	060	013	19.1	99.9	0889.99	999	1061.07	85510.	204.53	2.82	59.0
0111	004445	999	999	18.4	17.4	0888.42	094	1052.67	86154.	204.72	2.85	59.5
0112	004528	999	999	18.2	99.9	0886.05	999	1059.35	86627.	205.08	2.87	60.0

APPENDIX F

JIMSPHERE WIND PROFILES

TEST NR 4351
 JIMSPHERE WIND DATA
 CAPE CANAVERAL AFS, FLA.
 1639Z 08 SEP 1975

ALTITUDE FEET	DIR DEG	SPEED KTS	SHEAR /SEC	ASCENT FPS
16	90.0	4.00	0	99.9*
200	87.0	7.00	0	99.9*
400	86.0	9.00	0	99.9*
600	106.2	11.01	0	18.2
800	103.6	7.34	.0312	18.1
1000	103.8	6.87	.0046	23.0
1200	65.3	4.38	.0360	22.3
1400	82.0	9.00	.0417	22.6
1600	91.8	8.64	.0132	24.7
1800	71.1	9.95	.0302	28.4
2000	87.1	10.01	.0230	27.0
2200	82.9	12.08	.0183	19.6
2400	90.0	11.25	.0139	19.8
2600	95.7	11.66	.0100	19.3
2800	98.0	12.55	.0086	18.8
3000	99.7	12.37	.0036	19.1
3200	95.9	11.49	.0099	18.2
3400	93.2	11.90	.0060	18.2
3600	90.9	11.66	.0045	17.8
3800	91.2	10.95	.0060	17.8
4000	90.4	11.13	.0021	17.5
4200	90.4	11.60	.0040	17.0
4400	96.8	11.01	.0119	16.7
4600	102.7	9.95	.0129	17.5
4800	102.0	8.88	.0090	16.5
5000	100.5	8.23	.0058	17.0
5200	101.8	7.82	.0041	17.2
5400	98.8	7.46	.0045	16.6
5600	96.9	6.69	.0070	16.8
5800	94.6	7.16	.0045	16.2
6000	98.0	7.05	.0036	16.4
6200	97.4	7.76	.0060	17.0
6400	93.3	7.46	.0056	17.0
6600	88.9	7.93	.0067	17.3
6800	93.4	8.35	.0063	17.2
7000	97.1	9.83	.0141	16.7
7200	93.6	10.07	.0054	16.4
7400	89.3	9.53	.0076	16.3
7600	94.9	7.99	.0150	16.8
7800	90.8	7.58	.0054	16.3
8000	88.7	7.34	.0032	16.7
8200	92.7	6.69	.0068	16.7
8400	100.0	7.76	.0120	17.0
8600	116.0	7.11	.0183	17.0
8800	122.9	8.11	.0115	17.3
9000	126.7	7.87	.0047	16.8
9200	121.6	8.17	.0064	17.1
9400	124.9	7.58	.0060	17.1
9600	123.4	7.52	.0016	17.3
9800	123.7	9.00	.0122	17.1
10000	121.9	9.95	.0084	17.4
10200	125.6	9.71	.0053	16.6
10400	128.7	8.88	.0086	16.3

JIMSPHERE SOUNDING, 1639Z, 08 SEPT. 1976, Cont'd.

ALTITUDE FEET	DIR DEG	SPEED KTS	SHEAR /SEC	ASCENT FPS
10600	126.5	9.59	.0072	17.1
10800	135.4	8.53	.0152	17.0
11000	157.8	9.12	.0294	16.9
11200	158.1	9.12	.0005	17.1
11400	155.3	10.30	.0113	17.5
11600	156.5	9.95	.0036	17.0
11800	160.2	9.83	.0057	15.8
12000	161.2	9.12	.0063	15.5
12200	166.0	8.59	.0079	15.6
12400	170.5	8.17	.0065	16.1
12600	168.0	9.47	.0112	16.4
12800	163.8	10.01	.0076	16.0
13000	160.6	10.60	.0069	16.1
13200	167.8	9.65	.0135	16.8
13400	169.3	9.59	.0020	17.3
13600	169.1	9.71	.0011	17.9
13800	168.8	9.77	.0007	17.0
14000	169.4	11.25	.0126	16.6
14200	170.3	10.89	.0032	16.7
14400	180.6	11.43	.0174	16.9
14600	175.8	10.42	.0117	16.5
14800	181.4	10.18	.0086	16.2
15000	190.2	11.37	.0172	16.1
15200	190.0	10.95	.0036	16.4
15400	191.7	10.78	.0032	16.7
15600	190.7	8.94	.0152	17.0
15800	193.0	8.82	.0036	17.0
16000	192.4	9.30	.0040	17.5
16200	197.6	10.07	.0096	17.5
16400	198.1	9.83	.0021	16.8
16600	206.7	9.77	.0123	16.2
16800	204.9	9.89	.0028	16.8
17000	203.8	8.70	.0097	17.0
17200	211.7	7.99	.0117	16.5
17400	211.1	7.11	.0079	16.7
17600	209.9	6.04	.0089	16.5
17800	207.9	6.22	.0027	16.9
18000	220.4	5.68	.0119	14.9
18200	205.8	4.91	.0130	16.1
18400	205.6	4.20	.0060	17.1
18600	216.4	3.02	.0115	17.2
18800	222.0	2.78	.0032	17.8
19000	234.9	2.61	.0054	17.6
19200	237.5	2.84	.0021	17.2
19400	220.3	3.32	.0087	16.9
19600	194.0	4.20	.0161	16.2
19800	188.3	3.49	.0068	16.4

NOTE FOLLOWING WIND DATA SUBSTITUTED FOR MISSING JIMSPHERE DATA, TEST NO. 4351
 SOURCE CAPE CANAVERAL AFS, FLA. WINDSONDE

1300Z 08 SEP 1975

ALTITUDE FEET	DIR DEG	SPEED KTS		
16	90.0	4.00	0	99.9*
200	87.0	7.00	0	99.9*
400	86.0	9.00	0	99.9*

D SYS 030 SEQ ERR

TEST NR 3717
 JIMSPHERE WIND DATA
 CAPE CANAVERAL AFS, FLA.
 1239Z 09 SEP 1975

ALTITUDE FEET	DIR DEG KTS	SPEED	SHEAR /SEC	ASCENT FPS
16	45.0	3.00	0	99.9*
200	56.0	9.00	0	99.9*
400	60.0	9.00	0	99.9*
600	65.5	9.89	0	17.8
800	88.6	10.54	.0350	17.7
1000	78.5	10.07	.0162	18.0
1200	80.6	10.24	.0039	17.7
1400	99.0	8.64	.0289	18.0
1600	80.3	10.30	.0295	17.0
1800	90.8	8.17	.0234	17.3
2000	79.1	9.53	.0191	17.1
2200	87.3	8.05	.0163	17.3
2400	81.9	9.24	.0124	16.2
2600	90.3	8.11	.0146	17.8
2800	86.8	7.28	.0081	16.7
3000	95.6	8.64	.0152	17.2
3200	92.7	7.40	.0112	16.6
3400	90.1	7.76	.0046	16.5
3600	98.2	4.50	.0285	17.3
3800	70.0	4.44	.0187	17.4
4000	91.3	2.01	.0225	17.8
4200	58.5	4.26	.0233	16.5
4400	78.2	2.66	.0164	17.5
4600	63.9	4.50	.0170	17.5
4800	81.0	2.61	.0177	16.5
5000	60.9	4.14	.0162	17.9
5200	94.9	2.43	.0213	17.0
5400	56.5	4.20	.0228	17.7
5600	77.2	2.19	.0193	18.0
5800	63.2	4.09	.0170	17.4
6000	68.8	2.49	.0136	17.9
6200	54.5	4.56	.0192	18.1
6400	19.0	1.95	.0269	17.2
6600	59.7	3.61	.0205	17.2
6800	16.3	2.66	.0206	16.9
7000	58.1	2.19	.0154	18.0
7200	23.8	3.02	.0149	18.6
7400	92.6	1.01	.0241	17.9
7600	56.7	2.72	.0170	17.4
7800	118.2	2.01	.0210	17.4
8000	57.6	2.49	.0192	18.5
8200	133.9	1.48	.0213	17.5
8400	57.9	2.49	.0219	17.4
8600	102.7	3.02	.0184	16.5
8800	64.2	1.54	.0174	16.7
9000	59.4	3.91	.0205	16.8
9200	51.9	2.72	.0109	17.4
9400	54.4	4.03	.0117	17.0
9600	100.1	2.72	.0246	17.9
9800	61.6	4.44	.0244	18.0
10000	86.6	2.37	.0214	17.8
10200	74.7	4.09	.0153	17.9
10400	63.3	2.55	.0135	18.1

JIMSPHERE SOUNDING, 1239Z, 09 SEPT. 1976, Cont'd.

ALTITUDE FEET	DIR DEG	SPEED KTS	SHEAR /SEC	ASCENT FPS
10600	68.5	4.62	.0170	17.9
10800	57.7	2.84	.0161	18.1
11000	60.4	4.80	.0168	17.8
11200	98.6	3.67	.0249	16.8
11400	83.9	5.09	.0154	17.5
11600	104.5	3.67	.0180	17.1
11800	75.0	2.90	.0159	17.8
12000	117.6	3.14	.0185	17.5
12200	116.7	1.42	.0141	17.2
12400	135.9	3.61	.0196	17.4
12600	157.6	2.31	.0146	17.8
12800	139.4	3.61	.0137	17.6
13000	166.9	3.85	.0151	17.1
13200	149.9	3.14	.0108	17.2
13400	151.5	4.86	.0143	17.1
13600	179.1	4.50	.0191	17.0
13800	170.8	4.03	.0067	17.4
14000	194.5	5.80	.0224	16.7
14200	203.1	5.80	.0074	16.1
14400	209.4	5.33	.0063	17.2
14600	201.6	6.57	.0121	16.3
14800	215.7	6.39	.0133	16.8
15000	230.4	5.51	.0152	16.6
15200	228.7	5.33	.0020	16.5
15400	219.2	5.74	.0087	16.4
15600	226.8	6.34	.0086	16.3
15800	237.9	4.68	.0164	16.8
16000	227.8	6.39	.0168	16.8
16200	228.6	7.87	.0125	16.6
16400	217.9	5.39	.0234	16.4
16600	207.1	7.05	.0170	17.3
16800	225.8	6.87	.0191	16.9
17000	215.9	5.62	.0136	17.2
17200	217.3	6.75	.0096	16.6
17400	245.0	4.14	.0306	16.5
17600	208.1	3.97	.0216	15.8
17800	218.6	4.20	.0063	16.2
18000	233.9	3.97	.0093	16.9
18200	202.9	2.84	.0181	16.1
18400	236.8	2.78	.0135	16.3
18600	240.5	2.43	.0034	16.4
18800	249.5	1.66	.0071	16.0
19000	208.0	2.66	.0152	16.0
19200	203.4	3.61	.0081	16.2
19400	224.2	2.49	.0133	15.3
19600	218.5	2.96	.0045	15.9
19800	175.8	3.67	.0214	15.0
20000	190.8	3.08	.0093	15.4

NOTE FOLLOWING WIND DATA SUBSTITUTED FOR MISSING JIMSPHERE DATA, TEST NO. 3717
SOURCE CAPE CANAVERAL AFS, FLA. WINDSONDE

1233Z 09 SEP 1975

ALTITUDE FEET	DIR DEG	SPEED KTS		
16	45.0	3.00	0	99.9*
200	56.0	9.00	0	99.9*
400	60.0	9.00	0	99.9*

TEST NBR 3717
 JIMSPHERE WIND DATA
 CAPE CANAVERAL AFS, FLA.
 1424Z 09 SEP 1975

ALTITUDE FEET	DIR DEG	SPEED KTS	SHEAR /SEC	ASCENT FPS
16	70.0	5.00	0	99.9*
200	71.0	8.00	0	99.9*
400	69.0	8.00	0	99.9*
600	68.0	8.00	0	99.9*
800	70.0	10.00	0	99.9*
1000	59.6	11.37	0	17.2
1200	61.2	13.32	.0166	16.7
1400	71.0	10.84	.0273	16.7
1600	65.9	11.37	.0091	18.0
1800	72.0	9.83	.0160	17.3
2000	74.2	10.66	.0081	17.6
2200	69.5	8.35	.0210	17.6
2400	68.8	9.89	.0132	17.6
2600	71.2	7.64	.0195	17.8
2800	69.6	10.12	.0212	17.0
3000	62.0	7.82	.0215	17.7
3200	76.8	9.30	.0222	17.9
3400	61.4	8.05	.0220	18.2
3600	71.1	6.51	.0166	18.5
3800	59.7	9.30	.0268	18.5
4000	50.3	7.99	.0164	18.8
4200	70.1	8.53	.0245	18.4
4400	51.9	6.81	.0255	18.2
4600	73.1	6.16	.0211	18.2
4800	58.1	5.39	.0146	16.8
5000	66.4	4.56	.0092	18.2
5200	47.1	6.51	.0226	18.1
5400	45.6	5.21	.0107	17.9
5600	53.1	7.34	.0190	17.6
5800	42.8	5.27	.0200	18.1
6000	50.0	5.39	.0061	16.3
6200	39.0	4.03	.0138	18.4
6400	57.4	6.69	.0264	17.9
6600	43.7	5.45	.0162	18.5
6800	80.0	5.33	.0282	18.0
7000	78.5	4.91	0	17.9*
7200	77.1	4.50	0	17.8*
7400	75.6	4.09	0	17.6*
7600	74.2	3.67	0	17.5
7800	99.3	4.97	.0193	17.0
8000	94.6	4.26	.0072	18.2
8200	83.5	6.22	.0192	16.6
8400	79.7	4.56	.0150	18.1
8600	80.0	6.93	.0202	17.2
8800	90.6	6.63	.0106	18.0
9000	80.1	7.82	.0150	18.1
9200	105.8	6.39	.0291	17.3
9400	97.2	5.39	.0114	17.5
9600	133.9	6.69	.0342	17.6
9800	116.2	8.05	.0221	17.2
10000	132.4	7.16	.0198	19.2
10200	125.4	8.29	.0125	18.0
10400	118.6	6.04	.0200	17.7

JIMSPHERE SOUNDING, 09 SEPT. 1975, Cont'd.

ALTITUDE FEET	DIR DEG	SPEED KTS	SHEAR /SEC	ASCENT FPS
10600	140.8	7.64	.0258	18.0
10800	131.9	7.22	.0105	18.3
11000	137.6	4.97	.0195	19.1
11200	134.4	4.44	.0047	19.4
11400	90.7	4.80	.0293	18.0
11600	253.0	1.00	.0435	19.3
11800	107.1	2.13	.0205	17.3
12000	353.3	1.00	.0225	17.8
12200	148.5	1.84	.0228	17.2
12400	25.8	1.00	.0188	17.3
12600	113.3	2.84	.0243	16.8
12800	122.6	1.24	.0135	16.3
13000	129.5	1.36	.0015	17.2
13200	146.6	3.14	.0155	16.3
13400	173.9	2.90	.0122	16.6
13600	191.8	2.43	.0076	16.2
13800	198.4	3.26	.0079	16.0
14000	213.5	3.79	.0090	15.6
14200	217.5	4.62	.0076	15.9
14400	213.7	4.74	.0028	15.5
14600	217.6	4.50	.0034	15.9
14800	227.3	3.67	.0090	16.4
15000	195.8	4.32	.0195	16.8
15200	218.0	3.55	.0147	16.1
15400	240.4	5.33	.0205	16.1
15600	255.7	5.51	.0125	15.5
15800	252.3	5.57	.0030	16.3
16000	254.7	4.32	.0107	16.1
16200	232.7	6.10	.0227	16.8
16400	245.5	6.57	.0127	17.0
16600	235.8	6.63	.0094	17.1
16800	222.2	7.87	.0181	17.6
17000	232.0	9.71	.0195	17.5
17200	226.1	7.70	.0188	18.3
17400	222.7	9.35	.0148	17.5
17600	223.1	8.88	.0043	17.1
17800	214.1	8.05	.0132	16.6
18000	230.6	8.35	.0204	16.5
18200	222.2	6.22	.0198	17.8
18400	221.5	7.82	.0132	17.4
18600	214.4	8.23	.0092	17.2
18800	208.3	8.05	.0070	18.5
19000	225.1	7.52	.0195	17.3
19200	212.6	6.57	.0151	17.4
19400	229.2	8.47	.0240	16.7
19600	194.5	5.57	.0425	17.5
19800	181.6	4.44	.0132	16.1
20000	206.6	3.32	.0170	16.7

NOTE FOLLOWING WIND DATA SUBSTITUTED FOR MISSING JIMSPHERE DATA, TEST NO. 3717
 SOURCE CAPE CANAVERAL AFS, FLA.

WINDSONDE

1414Z 09 SEP 1975

ALTITUDE FEET	DIR DEG	SPEED KTS		
16	70.0	5.00	0	99.9*
200	71.0	8.00	0	99.9*
400	69.0	8.00	0	99.9*
600	68.0	8.00	0	99.9*
800	70.0	10.00	0	99.9*

TEST NBR 3717
JIMSPHERE WIND DATA
CAPE CANAVERAL AFS, FLA.
1855Z 09 SEP 1975

ALTITUDE FEET	DIR DEG KTS	SPEED KTS	SHEAR /SEC	ASCENT FPS
16	360.0	1.00	0	99.9*
200	74.0	5.00	0	99.9*
400	102.3	3.91	0	16.4
600	75.1	7.99	.0411	16.2
800	75.0	6.39	.0139	17.2
1000	84.8	6.22	.0095	17.0
1200	76.9	6.51	.0081	17.5
1400	98.3	6.28	.0200	16.9
1600	82.3	7.05	.0168	16.6
1800	95.0	6.04	.0148	17.0
2000	92.3	7.93	.0161	16.4
2200	80.4	5.92	.0211	17.0
2400	94.5	7.22	.0181	16.7
2600	79.5	7.70	.0173	17.6
2800	81.8	7.05	.0065	17.3
3000	84.1	7.52	.0049	17.0
3200	70.5	6.87	.0153	17.5
3400	93.2	7.22	.0238	17.3
3600	74.9	6.87	.0192	18.0
3800	93.7	7.58	.0206	17.8
4000	70.4	5.80	.0273	18.6
4200	82.5	6.63	.0131	17.8
4400	67.0	6.51	.0149	17.6
4600	80.2	6.34	.0127	17.2
4800	75.4	7.58	.0114	18.5
5000	84.3	7.52	.0096	17.1
5200	89.8	8.82	.0125	17.4
5400	72.5	6.81	.0259	17.3
5600	89.8	7.87	.0208	16.3
5800	69.4	6.81	.0240	17.3
6000	90.2	5.86	.0210	16.6
6200	84.0	7.82	.0179	17.7
6400	86.3	5.51	.0199	16.8
6600	94.3	7.11	.0154	17.1
6800	84.3	7.40	.0113	15.1
7000	94.4	5.39	.0197	16.1
7200	98.4	6.99	.0135	16.5
7400	94.1	5.80	.0103	17.5
7600	101.3	5.68	.0063	17.2
7800	88.2	6.39	.0130	16.7
8000	97.6	5.62	.0106	16.8
8200	85.4	6.87	.0156	16.6
8400	102.1	5.45	.0191	17.8
8600	90.9	4.68	.0105	19.0
8800	111.6	6.22	.0212	18.3
9000	111.0	4.20	.0168	19.1
9200	79.3	3.91	.0190	19.2
9400	112.2	5.09	.0237	19.5
9600	130.5	5.92	.0161	20.0
9800	153.2	5.15	.0196	21.1
10000	169.5	5.21	.0122	19.6
10200	169.8	3.83	.0113	20.6
10400	165.3	3.49	.0040	22.2

JIMSPHERE SOUNDING, 1855Z, 09 SEPT. 1975, Cont'd.

ALTITUDE FEET	DIR DEG	SPEED KTS	SHEAR /SEC	ASCENT FPS
10600	182.7	2.01	.0143	21.5
10800	182.2	2.43	.0035	21.7
11000	175.2	2.55	.0032	21.6
11200	159.4	3.32	.0094	23.3
11400	190.5	4.97	.0227	21.0
11600	204.1	5.98	.0139	20.5
11800	200.5	7.11	.0100	21.2
12000	193.8	4.20	.0249	21.9
12200	207.8	9.89	.0495	24.4
12400	187.6	6.22	.0386	18.9
12600	202.6	7.64	.0195	17.0
12800	220.2	7.22	.0195	13.6
13000	208.6	7.52	.0127	12.4
13200	213.1	8.35	.0087	13.2
13400	218.8	8.94	.0090	13.3
13600	221.2	9.35	.0045	12.8
13800	215.4	9.53	.0085	10.1
14000	212.5	8.35	.0107	10.8

NOTE FOLLOWING WIND DATA SUBSTITUTED FOR MISSING JIMSPHERE DATA, TEST NO. 3717
 SOURCE CAPE CANAVERAL AFS, FLA. WINDSONDE

1835Z 09 SEP 1975

ALTITUDE FEET	DIR DEG	SPEED KTS		
16	360.0	1.00	0	99.9*
200	74.0	5.00	0	99.9*
D SYS 030 SEQ ERR				

APPENDIX G

TOWER DATA

**Symbols and Units Used on Tower Data
Computer Printout**

<u>Symbol</u>	<u>Definition</u>	<u>Units</u>
DIR	Wind Direction	Degrees measured clockwise from north (0°)
DIR DEV	Standard Deviation of Wind Azimuth Angle for Specified Data Sampling interval	Degrees
DP	Dew Point	Deg. Farenheit (°F)
GST	Highest wind speed during specified data sampling interval	Knots
INT	Data Sampling Interval	Minutes
Lapse Rate	Temperature Difference between the 54' and 6' levels	°F
RH	Relative Humidity	Percent
SPD	Wind Speed	Knots
TT	Temperature	°F
5 PPM	Downwind distance at which the ground level pollutant concentration is 5 parts per million (5 PPM) for an assumed ground level emission rate of 1,000 pounds per minute.	Miles
10 PPM	Downwind distance at which the ground level pollutant concentration is 10 parts per million (10 PPM) for an assumed ground level emission rate of 1,000 pounds per minute.	
99,99.9	Missing data	
999,999.9		

10057 NNS 00000
WIND SYSTEM TOWER DATA
Cape Canaveral AFS, FLA

TEST NR 00000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.
YR MON DAY TIME INT THR

TEST NBR 06000
WIND SYSTEIN TOWER DATA
CAPE CANAVERAL AFS, FLA.

WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

YR	MON	DAY	TIME	INJ	TWA	12 FT	54 FT	162 FT	204 FT	6FT GFT	SAFT	LAPSE	5 PPM	DIR	54 FT	RH	DIR		PPM		DEV	
																	SPD	GST	DIR	SPD	GST	DIR
75	9	10	30	106	91	9	44	44	4	11	444	44	99	A1	099	099	-0.5	16.4	7.2	6.4	8.3	99
75	9	100	30	106	94	5	99	999	99	99	999	99	99	B3	999	999	-0.3	22.6	10.0	2.2	8.3	99
75	9	130	30	106	93	5	99	887	9	12	999	99	99	99	999	99	-0.3	21.0	9.3	2.9	8.3	99
75	9	200	30	108	103	4	99	995	8	11	999	99	99	99	999	99	-0.4	22.9	10.1	1.9	8.3	99
75	9	230	30	108	108	4	99	996	8	11	999	99	99	99	999	99	-0.2	19.2	8.5	4.5	8.3	99
75	9	400	30	108	108	4	99	999	99	99	999	99	99	93	999	999	-0.2	18.9	8.3	5.2	8.2	99
75	9	430	30	108	112	3	99	107	7	99	999	99	99	99	999	99	-0.1	18.9	8.3	4.4	8.3	99
75	9	500	30	108	113	3	99	104	6	99	999	99	99	99	999	99	-0	23.1	10.2	2.6	8.2	99
75	9	530	30	108	101	2	99	993	5	99	999	99	99	99	999	99	-0.1	17.6	7.8	8.9	8.1	99
75	9	600	30	108	124	2	99	999	99	99	999	99	99	91	999	999	-0.2	22.2	9.8	7.5	8.2	99
75	9	630	30	108	140	3	99	127	5	7	999	99	99	90	999	999	-0.1	21.1	9.3	16.4	8.2	99
75	9	700	30	108	126	2	99	105	5	99	999	99	99	80	999	999	-0.5	17.3	7.6	26.7	8.2	99
75	9	730	30	108	87	3	99	127	5	7	999	99	99	90	999	999	-0.7	19.1	8.4	9.7	8.1	99
75	9	800	30	108	72	5	99	60	9	99	999	99	99	99	999	999	-0.2	18.2	8.0	5.5	8.0	99
75	9	830	30	108	38	2	99	39	5	7	999	99	99	99	999	999	-0.4	12.8	5.6	35.9	7.9	99
75	9	900	30	108	58	2	99	999	99	99	999	99	99	78	999	999	-0.2	18.2	8.0	38.5	8.0	99
75	9	1000	30	104	42	1	99	22	4	6	999	99	99	79	999	999	-2.4	18.6	8.2	35.9	8.0	99
75	9	1030	30	108	16	4	99	999	99	99	999	99	99	78	999	999	-1.6	25.9	11.8	5.2	8.0	99
75	9	930	30	108	87	3	99	79	5	6	999	99	99	77	999	999	-3.9	45.4	20.0	3.2	8.1	99
75	9	1100	30	108	6	3	99	999	8	6	999	99	99	76	999	999	-1.9	26.1	11.5	7.2	8.0	99
75	9	1130	30	108	999	99	999	999	99	999	999	999	999	999	999	999	-0.9	99.9	99.9	99.9	99.9	99
75	9	1200	30	108	26	3	99	26	6	1	999	99	99	79	999	999	-2.1	34.3	15.1	2.9	8.1	99

TEST NBR 00000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS: FLA

REF ID: A6542
NR 0000
SYSTEM TOWER DATA
CAPE CANAVERAL AFS; FLA.

TEST HBA 00000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS: FLA.

TEST NBR 00000
AND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

TEST NBR 0000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

YR	MON	DAY	TIME	INT	TWR	12 FT	54 FT	162 FT	204 FT	6FT	6FT	54FT	LAPSE	5	25	DIR	54 FT	PPH	PPM	DEV	TT	RH				
75	9	9	1840	5	110	343	2	4	339	5	6	340	7	6	999	5	6	999	5	6	999	5	6	999		
75	9	9	1845	5	110	333	2	3	333	5	5	340	6	5	999	4	5	999	4	5	999	4	5	999		
75	9	9	1850	5	110	332	2	3	336	5	6	333	7	6	999	5	6	999	5	6	999	5	6	999		
75	9	9	1855	5	110	341	2	4	343	5	6	338	7	6	999	4	6	999	4	6	999	4	6	999		
75	9	9	1900	5	110	38	9	18	34	5	17	22	7	17	24	81	17	69	-0.4	12.0	5.3	23.0	8.1	69		
75	9	9	1930	30	110	55	12	26	56	18	30	43	26	35	59	22	30	77	67	67	-0.3	15.4	6.8	9.6	7.7	72
75	9	9	2000	30	110	99	9	10	999	99	99	999	99	99	999	99	99	999	99	999	99	999	99	999		
75	9	9	2100	30	110	999	99	10	999	99	999	999	99	999	999	99	999	999	999	999	999	999	999	999		
75	9	9	2200	30	110	127	6	9	119	8	119	999	99	999	999	99	999	999	999	999	999	999	999	999		
75	9	9	2230	30	110	127	6	9	119	8	119	999	99	999	999	99	999	999	999	999	999	999	999	999		
75	9	9	2300	30	110	117	7	12	115	9	15	106	13	18	122	12	16	77	73	73	73	73	73	73		
75	9	9	2330	30	110	120	6	10	117	9	14	106	13	19	121	13	15	76	70	71	71	71	71	71		
75	9	9	2340	30	110	120	6	10	117	9	14	106	13	19	121	13	15	75	70	71	71	71	71	71		

TEST NBR 00000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

TEST: INR 0000
WING SYSTEM TOWER DATA
CAPE CANAVERAL AFS; FLA.

TEST NHK 00000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS; FLA.

TEST NR 00000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

TEST NNU 00000
WIND SYSTEM TOWER DATA
CAFE CANAVERAL AFS, FLA.

TEST NUMBER
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

YR	MON	DAY	TIME	INIT	TURB	112 FT	54 FT	162 FT	204 FT	6FT 6FT 54FT LAPS	5	25	DIR	54 FT	RATE	PPH	PPM	DEV	TT	RH	1992)		
75	9	9	1220	30	311	46	5	99	48	6	9	999	99	99	83	999	999	2.1	28.5	12.6	5.9	85	99
75	9	9	1300	30	311	58	4	99	59	5	8	999	99	99	85	999	999	1.6	19.9	8.8	16.5	87	99
75	9	9	1330	30	311	80	6	99	74	7	11	999	99	99	86	999	999	1.0	23.0	10.1	6.0	87	99
75	9	9	1400	30	311	69	6	99	64	7	12	999	99	99	87	999	999	.7	20.1	8.9	8.0	88	99
75	9	9	1430	30	311	20	7	99	87	9	15	999	99	99	88	999	999	.7	20.7	9.1	7.1	89	99
75	9	9	1500	30	311	94	8	99	90	11	16	999	99	99	89	999	999	.2	17.0	7.5	8.6	89	99
75	9	9	1530	30	311	104	8	99	98	10	17	999	99	99	90	999	999	.2	17.9	7.9	8.4	89	99
75	9	9	1600	30	311	79	8	99	76	11	16	999	99	99	91	999	999	-0.5	19.1	8.4	3.5	89	99
75	9	9	1630	30	311	70	8	99	69	11	15	999	99	99	92	999	999	.2	21.9	9.7	3.8	89	99
75	9	9	1700	30	311	65	8	99	63	11	17	999	99	99	93	999	999	.2	13.2	5.8	16.2	88	99
75	9	9	1730	30	311	73	9	99	69	12	17	999	99	99	94	999	999	.7	22.6	9.9	5.1	88	99
75	9	9	1735	5	311	87	9	99	78	11	16	999	99	99	95	999	999	1.3	25.1	11.1	5.4	88	99
75	9	9	1740	5	311	88	9	99	76	10	13	999	99	99	96	999	999	.6	20.5	9.0	6.8	88	99
75	9	9	1745	5	311	61	7	99	99	99	99	999	99	99	97	999	999	.6	16.7	7.4	9.2	88	99
75	9	9	1750	5	311	63	8	99	63	10	15	999	99	99	98	999	999	1.4	21.7	9.5	10.3	88	99
75	9	9	1755	5	311	52	10	99	52	14	19	999	99	99	99	999	999	.7	17.5	7.7	13.6	88	99
75	9	9	1800	5	311	37	11	99	29	13	19	999	99	99	99	999	999	.8	16.6	7.3	18.2	86	99
75	9	9	1805	5	311	15	6	99	25	9	25	999	99	99	99	999	999	.7	13.3	5.8	22.4	84	99
75	9	9	1810	5	311	43	10	99	48	12	15	999	99	99	99	999	999	.9	17.5	7.7	16.2	84	99
75	9	9	1815	5	311	86	7	99	78	11	17	999	99	99	99	999	999	3.0	23.7	10.5	22.3	87	99
75	9	9	1820	5	311	80	4	99	75	7	12	999	99	99	99	999	999	1.3	17.0	7.5	24.7	82	99
75	9	9	1825	5	311	125	3	99	106	5	6	999	99	99	99	999	999	1.4	15.7	6.9	36.2	82	99
75	9	9	1830	5	311	157	3	99	120	3	4	999	99	99	99	999	999	3.0	19.7	8.7	46.2	85	99
75	9	9	1835	5	311	147	3	99	115	2	3	999	99	99	99	999	999	1.0	14.1	6.2	39.6	86	99

TEST SITE NUMBER 00000
WIND TOWER DATA
CAPE CANAVERAL AFS, FLA.

TEST NUR 00000
HIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

TEST NR 00000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

TEST NBR 00000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

VH MON DAY TIME INT TWR 12 FT 54 FT 162 FT 204 FT 6FT 6FT 54FT 5FT 25 DYN 36 FT
(Z) NLM DMR SPD GST DMR SPD GST DMR SPD GST DMR SPD GST TI DP UP RATE PPM PPM DEV IT RH
(295) (394) (492)

75	9	9	1840	5	313	167	1	2	127	3	4	70	4	73	5	6	77	70	66	-0.7	9.8	4.3	39.6	76	71				
75	9	9	1845	5	313	999	99	99	91	5	5	58	4	67	7	7	78	71	66	-0.9	8.7	3.9	50.5	77	69				
75	9	9	1850	5	313	156	1	1	27	3	3	42	5	67	3	4	78	71	65	-1.0	8.3	3.7	55.0	77	67				
75	9	9	1855	5	313	148	1	1	44	7	3	45	3	55	5	6	78	71	64	-0.8	8.9	3.9	52.2	78	62				
75	9	9	1900	5	313	999	1	1	3	3	3	23	5	6	23	5	9	79	72	64	-0.6	8.9	3.9	52.2	78	62			
75	9	9	1900	5	313	999	1	1	47	8	9	27	8	9	40	10	11	79	71	66	-0.5	9.1	4.0	61.7	79	66			
75	9	9	1930	30	313	71	6	67	64	12	27	62	14	25	60	18	32	76	70	67	-0.4	11.6	5.1	53.0	76	73			
75	9	9	2000	30	313	77	2	6	77	5	12	61	8	37	11	11	37	11	11	11	79	71	66	-0.6	8.7	3.8	67.1	73	66
75	9	9	2030	30	313	158	1	3	104	11	17	80	12	17	87	14	18	32	76	70	67	-0.4	11.6	5.1	53.0	76	73		
75	9	9	2100	30	313	180	2	3	173	5	6	165	5	6	158	6	7	69	67	67	-0.6	8.7	3.8	67.1	73	66			
75	9	9	2130	30	313	144	2	9	167	6	7	117	6	8	109	9	11	77	71	68	-0.7	11.4	5.0	21.6	74	61			
75	9	9	2200	30	313	98	6	12	89	12	117	8	11	115	11	12	75	71	68	-0.7	11.4	5.0	21.6	74	61				
75	9	9	2230	30	313	125	4	9	114	18	22	94	17	20	105	9	19	77	71	68	-0.2	12.1	5.3	26.8	77	74			
75	9	9	2300	30	313	117	4	8	146	14	19	126	14	19	136	15	20	75	70	68	-0.3	15.2	6.7	10.3	75	80			
75	9	9	2330	30	313	122	4	8	117	15	19	123	15	19	135	16	20	75	70	67	-0.2	18.0	7.9	5.8	75	77			

LEAFLESS
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

YR	MON	DAY	TIME	INT	TWR	12 FT	54 FT	SPD	65 FT	INT	162 FT	204 FT	SPD	65 FT	INT	162 FT	25 FT	DIR	54 FT	INT	11 FT	DEV	
(1941)												(1945)											
75	9	9	30	30	403	93	4	99	102	8	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	100	30	403	88	4	99	99	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	130	30	403	90	4	99	99	96	7	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	200	30	403	94	4	99	104	8	10	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	230	30	403	104	4	99	111	8	11	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	300	30	403	103	4	99	108	6	10	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	330	30	403	103	3	99	111	7	10	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	400	30	403	115	3	99	119	7	98	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	430	30	403	102	3	99	112	7	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	500	30	403	101	2	99	113	6	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	530	30	403	63	1	99	101	5	97	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	600	30	403	56	3	99	69	6	18	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	630	30	403	311	1	99	12	3	5	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	700	30	403	69	2	99	84	7	12	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	730	30	403	69	2	99	99	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	800	30	403	68	2	99	90	7	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	830	30	403	99	99	99	69	7	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	900	30	403	99	99	99	68	6	7	99	99	999	99	999	99	999	99	999	99	999	99
75	9	9	930	30	403	49	2	99	60	7	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	1000	30	403	90	1	99	41	1	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	1100	30	403	3	2	99	65	2	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	1130	30	403	99	1	99	35	6	7	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	1200	30	403	99	1	99	66	6	7	999	99	999	99	999	99	999	99	999	99	999	99

TEST NR 00000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

YR	MON	DAY	TIME	INT	TWR	12 FT	54 FT	162 FT			204 FT			GFT			SAFT			LAPSE			54 FT			
								NHR	DIR	SPD	GST	DIR	SPD	GST	DIR	SPD	GST	DIR	SPD	GST	DIR	SPD	GST			
75	9	9	1840	5	403	331	2	99	340	6	7	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	1845	5	403	353	2	99	25	6	7	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	1850	5	403	24	3	99	43	7	8	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	1855	5	403	26	3	99	45	8	9	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	1900	5	403	32	2	99	45	6	7	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	1930	30	403	19	9	96	21	14	24	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	2000	30	403	33	5	96	40	9	22	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	2030	30	403	112	3	99	112	7	9	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	2100	30	403	86	2	99	87	7	99	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	2130	30	403	117	4	96	117	9	96	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	2200	30	403	88	7	99	95	11	99	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	2230	30	403	95	5	99	106	10	99	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	2300	30	403	68	6	99	104	10	14	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99
75	9	9	2330	30	403	101	6	99	107	10	14	999	99	99	999	99	999	99	999	99	999	99	999	99	999	99

TEST NUMBER
WIND SYSTEM FOWLER DATA
CAPE CANAVERAL AFS, FLA.

YR	MON	DAY	TIME	INT	1M8	1L2	FT	54	F1	162	F1	204	FT	6FT	3FT	LAPSE	PPM	PPM	PPM	PPM	ST RT			
																					EST			
75	9	9	30	30	412	107	5	99	106	7	10	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	100	30	412	113	5	99	106	7	11	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	130	30	412	113	5	99	109	7	11	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	200	30	412	116	4	99	113	6	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	230	30	412	118	3	99	115	5	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	300	30	412	135	3	99	124	5	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	400	30	412	133	2	99	121	4	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	430	30	412	136	3	99	129	5	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	500	30	412	148	3	99	115	4	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	530	30	412	149	3	99	129	5	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	600	30	412	136	1	99	127	2	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	660	30	412	258	1	99	111	3	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	700	30	412	133	2	99	121	4	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	730	30	412	327	3	99	114	3	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	750	30	412	999	99	99	105	2	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	780	30	412	50	1	99	127	2	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	800	30	412	246	1	99	17	5	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	830	30	412	338	2	99	117	3	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	860	30	412	356	2	99	114	3	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	890	30	412	356	2	99	114	3	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	9100	30	412	336	2	99	114	3	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	9130	30	412	336	2	99	114	3	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	9160	30	412	336	2	99	114	3	99	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	9190	30	412	342	2	99	114	3	99	99	99	99	99	99	99	99	99	99	99	99	99	99

WIND SYSTEM TOWER DATA
CAPE CANAVERAL APES, FLA.

14 MUN DAY TIME INT WTH			12 FT MIN DTH 8FT GHT DIN 310			162 FT MAX GRD DIN 310			204 FT MAX GRD DIN 310			250 FT MAX GRD DIN 310			310 FT MAX GRD DIN 310			394 FT MAX GRD DIN 310					
YR	MN	DAY	INT	WTH	MIN	DTH	8FT	GHT	DIN	310	GRD	DIN	310	GRD	DIN	310	GRD	DIN	310	GRD	DIN	310	GRD
75	9	9	30	30	415	96	2	99	90	5	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	100	30	415	103	2	99	92	5	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	130	30	415	104	2	99	93	6	99	99	99	99	99	99	99	99	99	99	99	99	99
75	9	9	200	30	415	103	1	99	92	5	7999	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999
75	9	9	230	30	415	110	1	99	101	4	98	999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	300	30	415	135	1	99	106	5	7999	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999
75	9	9	400	30	415	109	1	99	94	4	99	999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	430	30	415	101	1	99	98	5	7999	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999
75	9	9	500	30	415	93	1	99	60	4	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	530	30	415	104	1	99	86	3	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	600	30	415	153	1	99	112	3	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	630	30	415	158	1	99	96	4	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	700	30	415	143	5	99	120	1	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	730	30	415	74	4	99	90	6	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	800	30	415	323	1	99	346	2	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	900	30	415	180	1	99	120	1	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	930	30	415	323	1	99	41	4	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	1000	30	415	21	1	99	16	6	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	1030	30	415	34	2	99	31	6	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	1100	30	415	34	2	99	4	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99	
75	9	9	1130	30	415	38	1	99	40	5	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99
75	9	9	1200	30	415	38	1	99	40	5	99	9999	99	9999	99	9999	99	9999	99	9999	99	9999	99

1651 NBR 90000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

12	MON	DAY	TIME	TIN	TUR	12 FT	162 FT	FT	204 FT	6FT	5FT	5FT UNT	5FT LNT	5FT DIF	5 FT	5 FT
	NBR	DATA	SPD	051	DIR	SPD	EST	018	SPD	EST	018	PPN	PPN	DEV	TT	FM
75	9	9	1230	30	415	56	1	99	48	4	7	699	699	99	70	999
75	9	9	1300	30	415	73	2	99	64	-4	99	999	999	99	99	99
75	9	9	1330	30	415	55	4	99	54	-5	99	999	999	99	99	99
75	9	9	1400	30	415	62	4	99	56	-6	10	999	999	99	98	99
75	9	9	1430	30	415	62	5	99	58	-8	92	999	999	99	99	99
75	9	9	1500	30	415	79	6	99	71	-10	15	999	999	99	99	99
75	9	9	1530	30	415	87	5	99	80	-8	13	999	999	99	99	99
75	9	9	1600	30	415	49	6	99	999	-9	999	999	999	99	99	99
75	9	9	1630	30	415	37	6	99	35	-9	13	999	999	99	99	99
75	9	9	1700	30	415	53	7	99	59	-10	15	999	999	99	99	99
75	9	9	1730	30	415	49	7	99	999	-10	44	999	999	99	99	99
75	9	9	1735	5	415	31	6	99	31	-9	12	999	999	99	99	99
75	9	9	1740	5	415	28	7	99	29	-9	12	999	999	99	99	99
75	9	9	1745	5	415	30	5	99	29	-9	11	999	999	99	99	99
75	9	9	1750	5	415	36	6	99	35	-9	11	999	999	99	99	99
75	9	9	1755	5	415	35	6	99	35	-8	10	999	999	99	99	99
75	9	9	1800	5	415	79	5	99	69	-6	69	999	999	99	99	99
75	9	9	1805	5	415	77	4	99	62	-5	99	999	999	99	99	99
75	9	9	1820	5	415	88	4	99	70	-7	99	999	999	99	99	99
75	9	9	1825	5	415	73	3	99	76	-4	99	999	999	99	99	99
75	9	9	1830	5	415	80	2	99	77	-4	99	999	999	99	99	99
75	9	9	1835	5	415	74	2	99	66	-5	99	999	999	99	99	99

TEST NUMBER 00000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

HR	MON	DAY	TIME	INIT	INTV	5 FT	12 FT	24 FT	45 FT	60 FT	90 FT	120 FT	162 FT	RT	LAPSE	DIR	SHFT	RH
75	9	9	1840	5	415	70	1	99	70	3	4	999	99	99	99	99	99	99
75	9	9	1845	5	415	77	1	99	99	2	3	999	999	99	99	99	99	99
75	9	9	1850	5	415	108	1	99	108	3	6	999	999	99	99	99	99	99
75	9	9	1855	5	415	116	1	99	99	1	99	999	999	99	99	99	99	99
75	9	9	1900	5	415	125	3	99	105	4	9	999	999	99	99	99	99	99
75	9	9	1930	30	415	156	1	99	105	4	9	999	999	99	99	99	99	99
75	9	9	2000	30	415	168	2	99	150	4	7	999	999	99	99	99	99	99
75	9	9	2100	30	415	190	2	99	150	4	7	999	999	99	99	99	99	99
75	9	9	2130	30	415	194	2	99	130	4	4	999	999	99	99	99	99	99
75	9	9	2030	30	415	167	1	99	137	4	6	999	999	99	99	99	99	99
75	9	9	2200	30	415	109	6	99	150	4	7	999	999	99	99	99	99	99
75	9	9	2300	30	415	122	2	99	115	4	4	999	999	99	99	99	99	99
75	9	9	2330	30	415	121	3	99	115	4	4	999	999	99	99	99	99	99
75	9	9	2400	30	415	124	0	99	115	4	4	999	999	99	99	99	99	99

1951 AUG 00000
WIND SYSTEM TOWER DATA
CAPE CANAVERAL AFS, FLA.

YR	MON	DAY	TIME	INI	TWR	12 FT	40 FT	80 FT	EST DIR	SPI	GST DIR	SPI	DIR SPN	EST DIR	SPI	GST DIR	SPI	DIR SPN	EST DIR	SPN	DEV	DFT	DIR SPN	EST DIR	SPN	DEV	DFT	RH	
75	9	9	1230	30	309	17	2	99	19	3	9	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	
75	9	9	1300	30	509	19	2	99	21	2	4	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	
75	9	9	1330	30	509	91	13	99	67	8	16	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	
75	9	9	1400	30	509	81	13	99	99	5	99	73	11	29	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999
75	9	9	1430	30	509	77	15	99	99	4	99	986	8	14	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999
75	9	9	1500	30	509	69	4	99	99	-	16	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	
75	9	9	1530	30	509	68	4	99	86	8	16	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	
75	9	9	1600	30	509	72	4	99	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	
75	9	9	1630	30	509	74	5	66	55	5	66	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	
75	9	9	1700	30	509	75	4	99	99	99	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	
75	9	9	1730	30	509	76	5	66	55	5	66	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	
75	9	9	1740	30	509	61	6	99	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	
75	9	9	1750	30	509	55	6	99	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	
75	9	9	1755	30	509	50	5	66	50	50	50	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	
75	9	9	1745	30	509	46	4	99	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	99	999	
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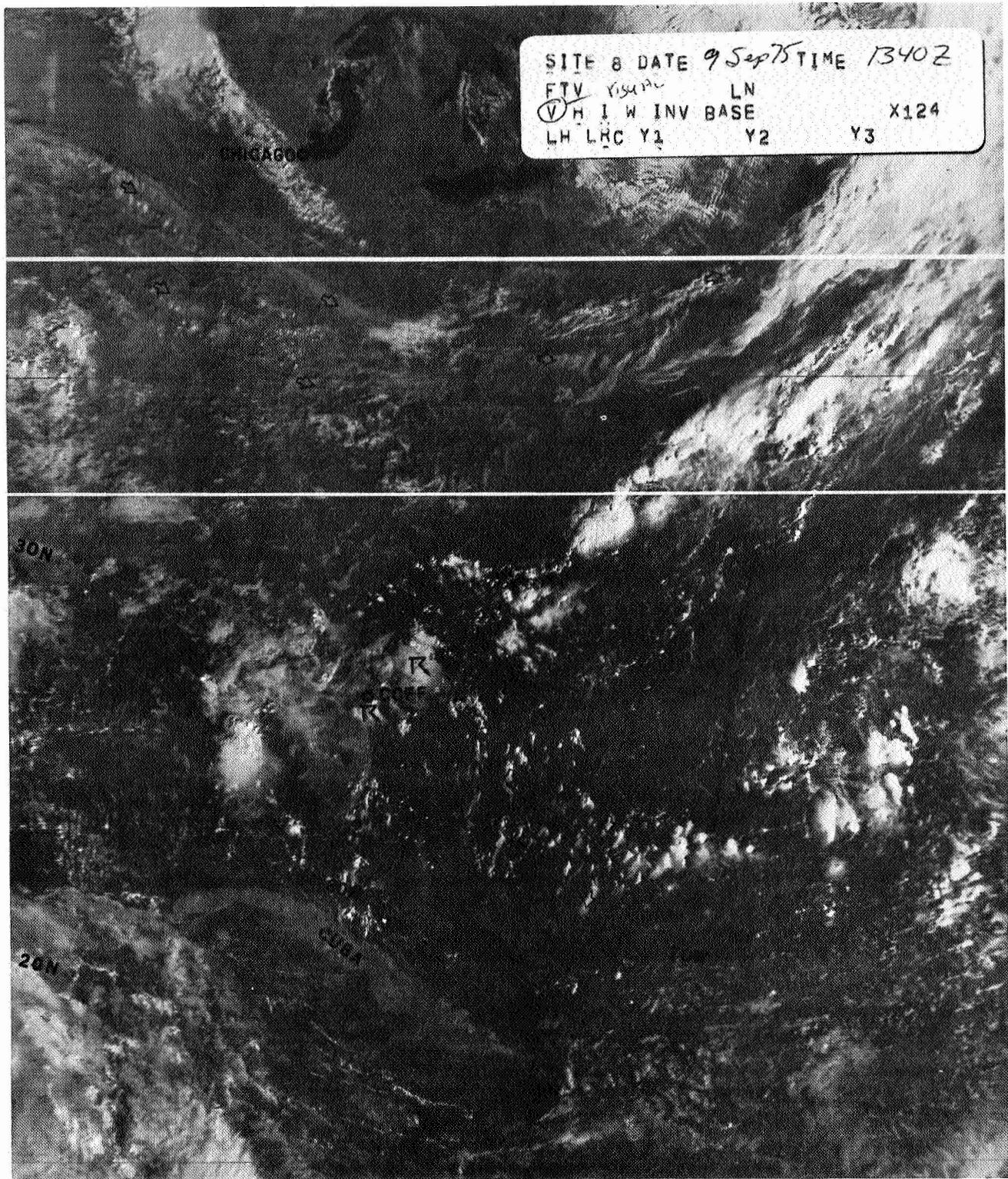
TEST NUMBER
WIND SYSTEM, TOWER DATA
CAPE CANAVERAL AIR FORCE STATION, FLA.

YEAR MONTH DAY TIME INT LNB 125FT 54 FT 204 FT 6FT 6FT 54FT LADSE 59 25 DIR 54 FT
(Z) NNB DHM DSD DSD DIR SPN DSD DSD DSD DIR SPN DSD DSD DSD DIR SPN DSD DSD DSD
(2003) (1994)

75	9	9	30	30	714	72	2	99	984	99	99	999	999	102	2400	1006	509	82	99			
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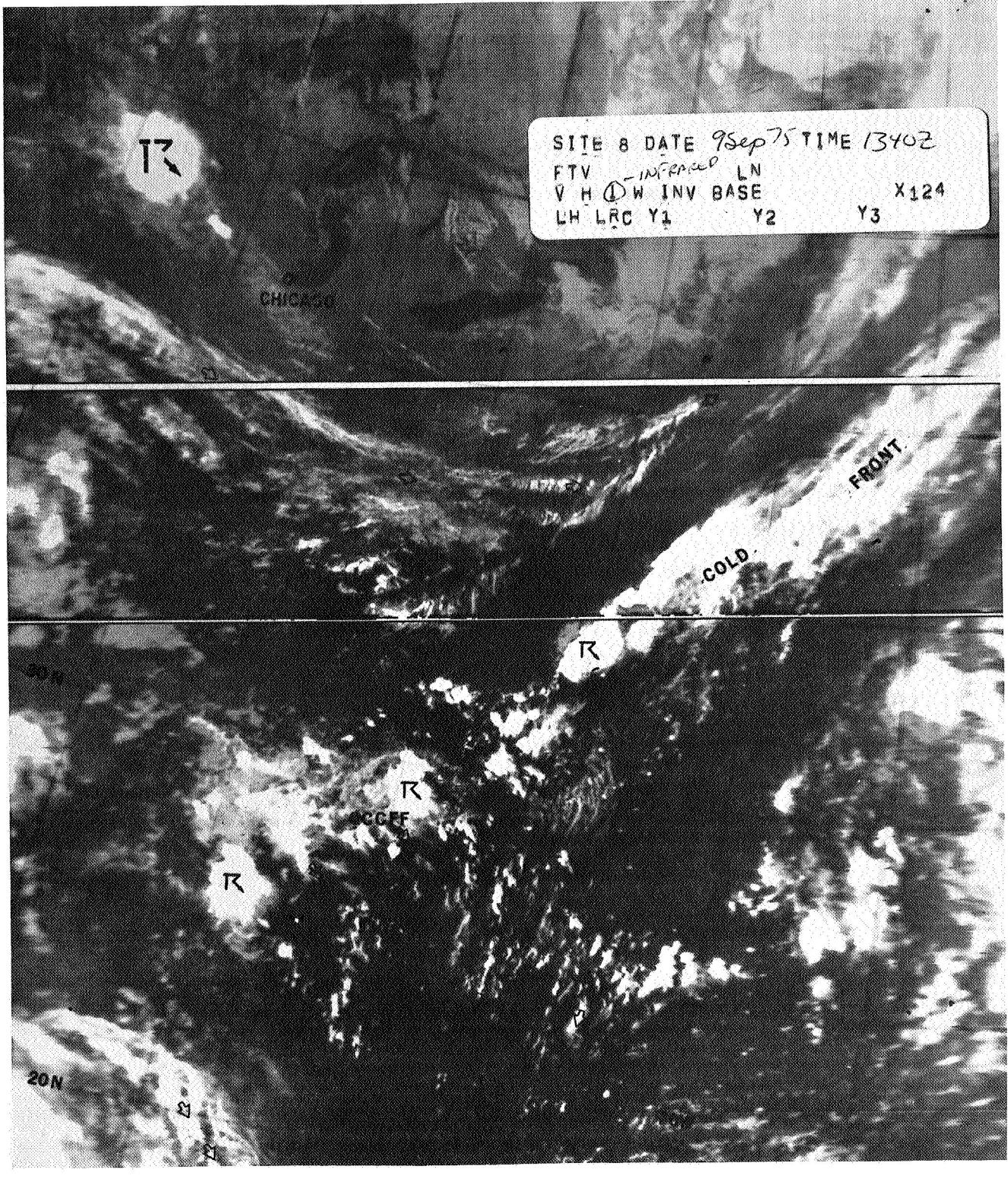
APPENDIX H

SATELLITE IMAGERY,
VISIBLE AND IR BAND



Satellite Imagery, Visual Band, 9 Sept. '75, 1340Z.

Source: U.S. Air Force Dense Meteorological Satellite Picture (DMSP)



Satellite Imagery, Infrared Band, 9 Sept. '75, 1340Z.

Source: U.S. Air Force DMSP

APPENDIX I
CALCULATION OF THERMODYNAMIC VARIABLES FROM
RAWINSONDE DATA

The equations used for calculation of thermodynamic variables from measurements of altitude, temperature and relative humidity obtained from the GMD-4, AMQ-9 rawinsonde system are summarized herein; these equations, originally developed for the GMD-2 system (Ref. 1), must be used in conjunction with the list of symbols and units provided at the end of this appendix.

Atmospheric Density, ρ

$$\rho = 348.38 \frac{P}{T_v}$$

Pressure, P

$$P = P' 10^{-(h-h')/(221.266 T_{vm})}$$

Geopotential Height, h

$$h = \frac{g_o}{9.8} \frac{r_e^H}{r_e + H}$$

Virtual Temperature, T_v

$$T_v = T(1 + .376932 e/P')$$

Mean Virtual Temperature, T_{vm}

$$T_{vm} = \frac{T'_v + T_v}{2}$$

Vapor Pressure, e

$$e = 6.11 f_D 10^{7.5t/(t+237.3)}$$

Dew Point Temperature, t_d

$$t_d = \frac{237.3 \log e - 186.527}{8.236 - \log e}$$

Potential Temperature, θ

$$\theta = T \left(\frac{1000}{P} \right)^{.288}$$

Virtual Potential Temperature θ_v

$$\theta_v = T_v \left(\frac{1000}{P} \right)^{.288}$$

Absolute Humidity, ρ_w

$$\rho_w = 216.7 e/p$$

Microwave Refractive Index, n

$$n = 1 + \left[\frac{1}{T} \left(77.6P - 11e + \frac{374808e}{T} \right) \right] 10^{-6}$$

For data tabulation, use:

$$N = (n-1)10^6$$

Speed of Sound, v_s

$$v_s = 643.855 \left(\frac{T}{273.16} \right)^{0.5}$$

LIST OF SYMBOLS AND UNITS

e	vapor pressure	millibars (mb)
f_D	relative humidity expressed as a decimal	
g_0	acceleration of gravity at geographical location of the rawinsonde station	meters/seconds ² (m/sec ²)
h	geopotential height at the top of the layer bounded by h and h'	feet (ft)
h'	geopotential height at the bottom of the layer bounded by h and h'	(ft)
H	geometric altitude at the top of the layer bounded by H and H'	(ft)
H'	Geometric altitude at the bottom of the layer bounded by H and H'	(ft)
n	microwave refractive index	
N	unit of refractive index used for simplification of data tabulation	
P	pressure at geopotential height h	(mb)
p'	pressure at geopotential height h'	(mb)
r_e	radius of the earth	(ft)
t	temperature	degrees Celsius ($^{\circ}$ C)
T	temperature	degrees Kelvin ($^{\circ}$ K)
t_d	dew point temperature	($^{\circ}$ C)
T_v	virtual temperature at geopotential height h	($^{\circ}$ K)

T_v'	virtual temperature at geopotential height h'	(°K)
T_{vm}	the mean virtual temperature of layer bounded by h and h'	(°K)
v_s	speed of sound	knots
ρ	atmospheric density	grams/meter ³ (gm/m ³)
ρ_w	absolute humidity	(gm/m ³)
θ	potential temperature	(°K)
θ_v	virtual potential temperature	(°K)

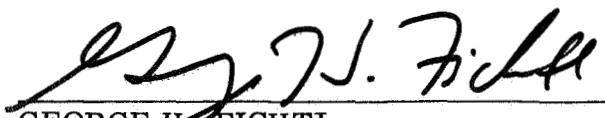
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 Pan American Airways, Guided Missile Range Division,
 Patrick Air Force Base, Florida, 10 May 1962.

APPROVAL

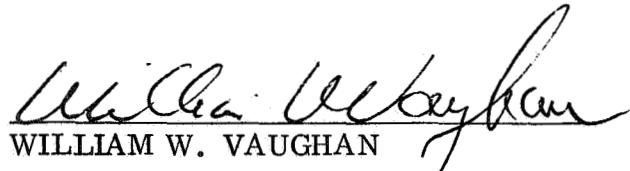
The information in this report has been reviewed for security classification. Review of any information concerning Department of Defense or Atomic Energy Commission programs has been made by the MSFC Security Classification Officer. This report, in its entirety, has been determined to be unclassified.

This document has also been reviewed and approved for technical accuracy.



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